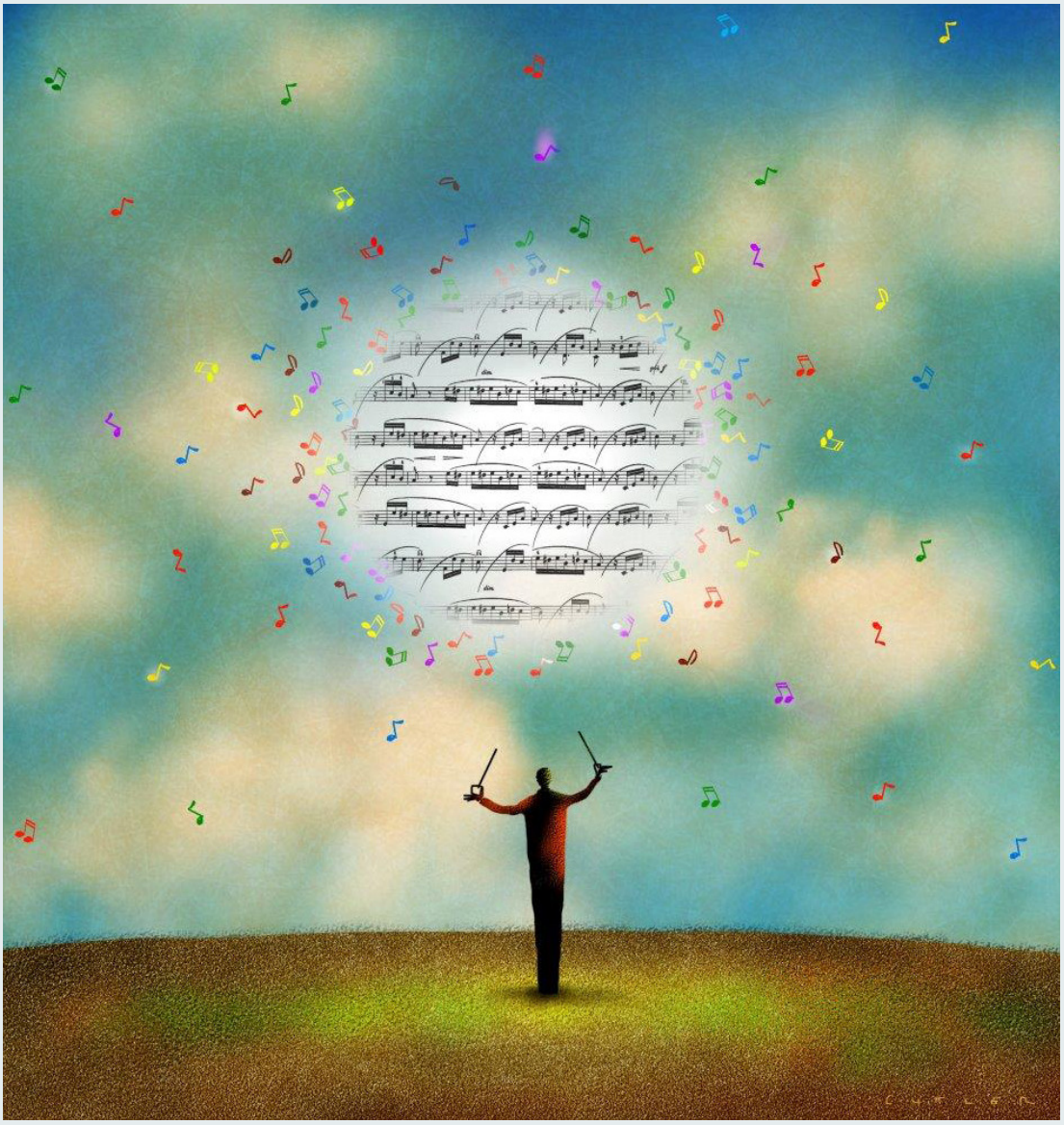

# 2019 CAQH INDEX®

## Conducting Electronic Business Transactions: Why Greater Harmonization Across the Industry is Needed

CAQH® Explorations | INDEX®

# 2019 CAQH Index
## Conducting Electronic Business Transactions: Why Greater Harmonization Across the Industry is Needed

# Contents



CAQH, a non-profit alliance, is the leader in creating shared initiatives to streamline the business of healthcare. Through collaboration and innovation, CAQH accelerates the transformation of business processes, delivering value to providers, patients and health plans.

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# Executive Summary

Addressing administrative costs and burden has the potential to not only reduce healthcare spending, but also to direct more resources towards patient care. While the healthcare industry has made significant progress to automate and reduce costs associated with administrative functions, the United States still spends more on healthcare and administrative services than any other developed nation.[1,2,3] Health plan and health system complexities, inefficient processes and government regulations have been cited as reasons for the higher level of spending.[4,5]

1 William H. Shrank, MD, MSHS; Teresa L. Rogstad, MPH; and Natasha Parekh, MD, MS, "Waste in the US Health Care System: Estimated Costs and Potential for Savings," JAMA. 2019;322(15):1501–1509. doi:https://doi.org/10.1001/jama.2019.13978.

2 Les Masterson, "Labor, administrative costs drive US healthcare spending far beyond other nations," Healthcare Dive, March 13, 2018, https://www.healthcaredive.com/news/labor-administrative-costs-drive-us-healthcare-spending-far-beyond-other-n/518994/.

3 Irene Papanicolas, PhD; Liana R. Woskie, MSc; Ashish K. Jha, MD, MPH, "Health Care Spending in the United States and Other High-Income Countries," JAMA. 2018;319(10):1024–1039. doi:https://doi.org/10.1001/jama.2018.1150.

4 Austin Frakt, "The Huge Waste in the U.S. Health System," The New York Times, October 7, 2019, https://www.nytimes.com/2019/10/07/upshot/health-care-waste-study.html.

5 Austin Frakt, "The Astonishingly High Administrative Costs of U.S. Health Care," The New York Times, July 16, 2019, https://www.nytimes.com/2018/07/16/upshot/costs-health-care-us.html.

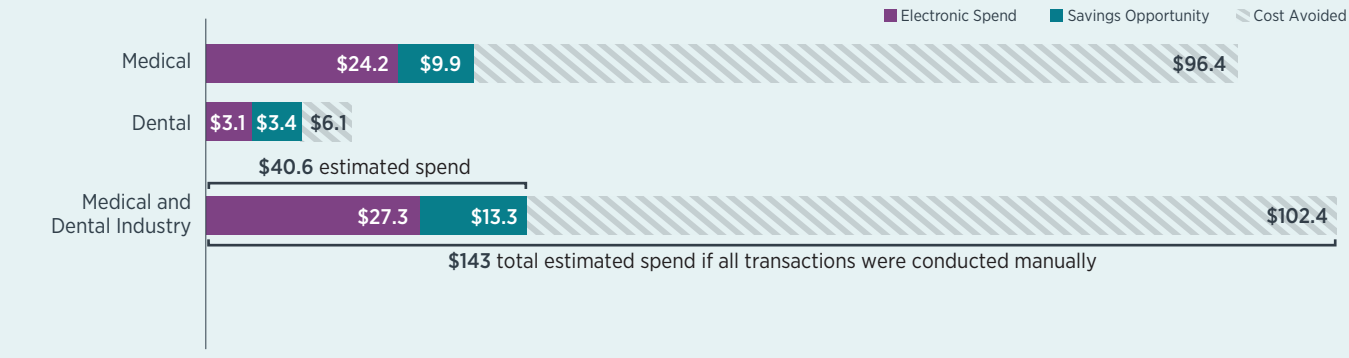
6 "Projected," Health Expenditure Data, CMS website, last modified December 17, 2019, https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical. Healthcare administrative complexities include all national health expenditures (NHE), less investment (research, structures and equipment) and public health outlays by federal and state governments.

Spending on healthcare administration costs an estimated $350 billion annually in the United States due to its complexity.[6] Data from the 2019 CAQH Index, as shown in Figure 1, indicates that $40.6 billion or 12 percent of the $350 billion spent on administrative complexity, is associated with conducting administrative transactions tracked by the CAQH Index. Of the $40.6 billion spent on these transactions, $13.3 billion or 33 percent of existing annual spending on administrative transactions could be saved by completing the transition from manual and partially electronic processing to fully electronic processing. The progress that the industry has already made to automate these administrative transactions has saved the industry over $102 billion annually.

This annual report, the seventh produced by CAQH, measures progress in reducing the costs and burden associated with administrative transactions exchanged across the medical and dental industries. The CAQH Index tracks adoption of Health Insurance Portability and Accountability Act (HIPAA) mandated and other electronic administrative transactions. These transactions include verifying insurance coverage, obtaining payment authorization for care, submitting a claim and supplemental information, and sending and receiving payments.

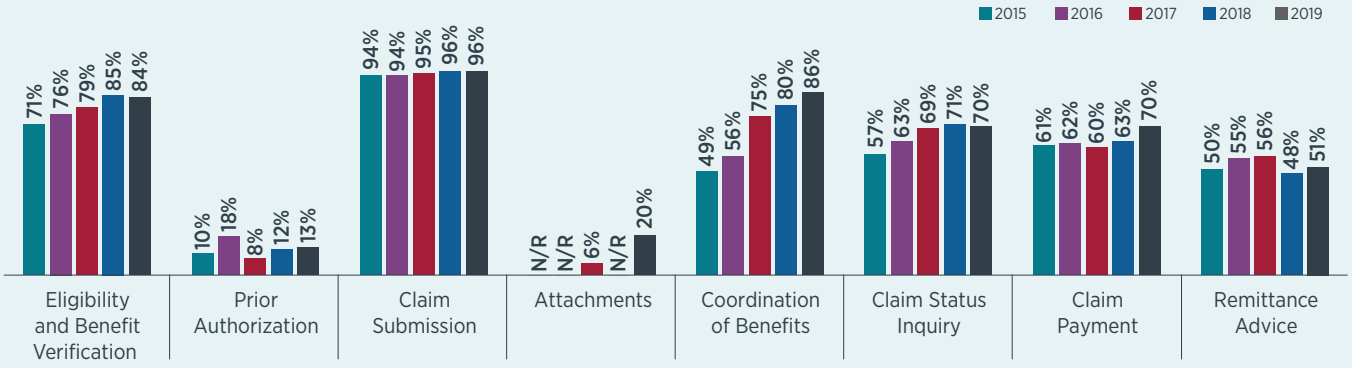
The CAQH Index also estimates the annual volume of these transactions, their cost and staff time to complete. These data points are reported by the mode

**Figure 1: Estimated Medical and Dental Spend and Savings, 2019 CAQH Index (in billions)**




Note: May not be drawn to scale.

**Figure 2: Medical Plan Adoption of Fully Electronic Administrative Transactions, 2015-2019 CAQH Index**



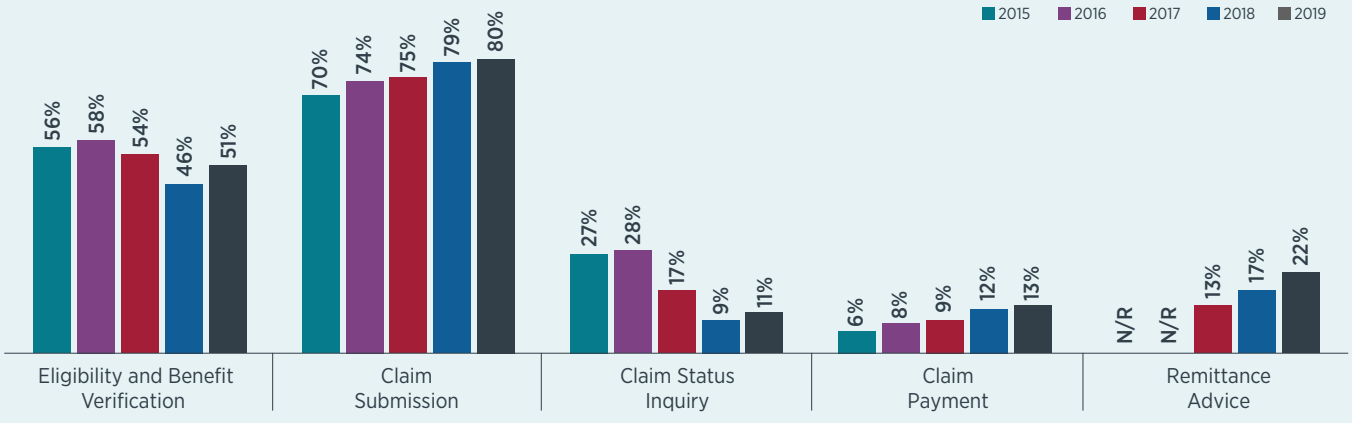

N/R = Not Reported

in which transactions are conducted – manual (phone, fax, mail or email), electronic (HIPAA standard) or partially electronic (web portals or interactive voice response, IVR). Additionally, due to more refined data collection methods and greater participation by medical and dental providers, estimates related to the use of partially electronic methods to exchange administrative transactions can be reported this year.

**Adoption of Electronic Transactions Improved for Most Medical and all Dental Transactions:** While medical plans experienced a steady increase in electronic adoption for five transactions, two transactions saw a one percentage point decrease in electronic adoption and one remained stable. Claim payment and coordination of benefits (COB) saw the highest increases in electronic adoption, by seven and six percentage points respectively. Adoption of electronic remittance advice rebounded three percentage points after an eight percentage point drop in the last report.

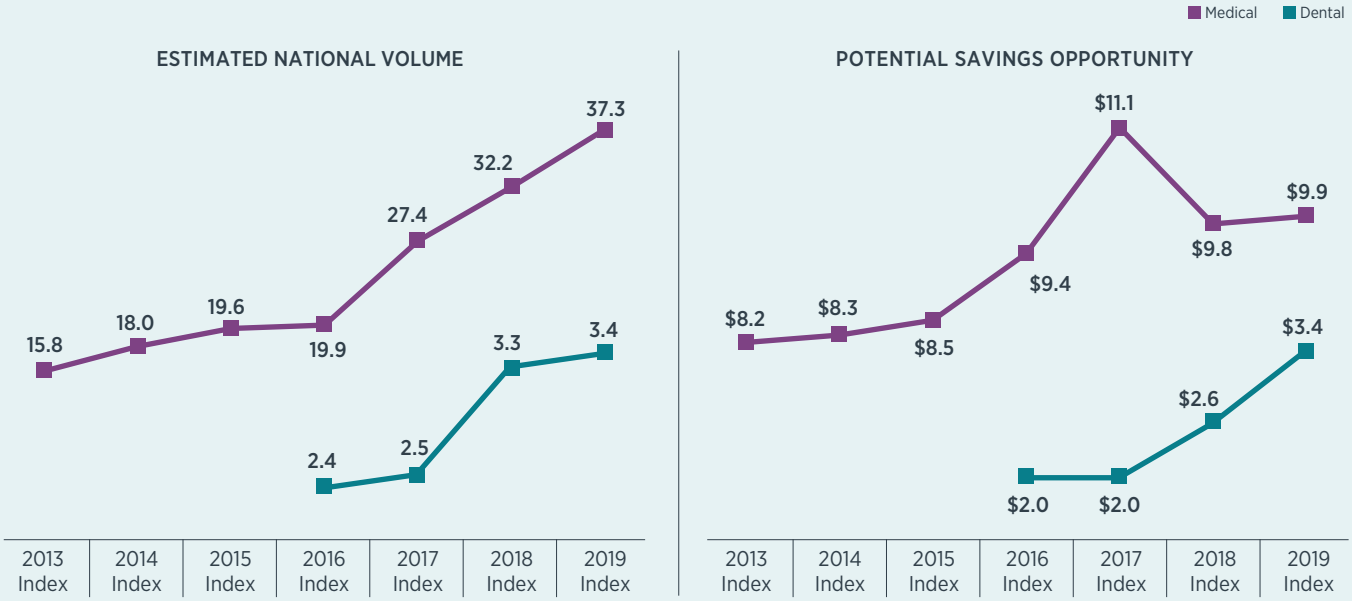
Dental plans, by comparison, experienced an increase in electronic adoption across all transactions. Adoption of electronic remittance advice rose by five percentage points as did adoption of eligibility and benefit verification, a reversal after an eight percentage point decline for eligibility and benefit verification in the prior report. This is encouraging for the dental industry,

**Figure 3: Dental Plan Adoption of Fully Electronic Administrative Transactions, 2015-2019 CAQH Index**




N/R = Not Reported

**Figure 4: Industry Estimated National Volume and Potential Savings Opportunity, 2013-2019 CAQH Index (in billions)**




Note: From year to year reported transactions may change due to low volume collected. For example, in 2019, there are two additional transactions reported for the medical industry, attachments and coordination of benefits. Data represents plans and providers.

May not be drawn to scale.

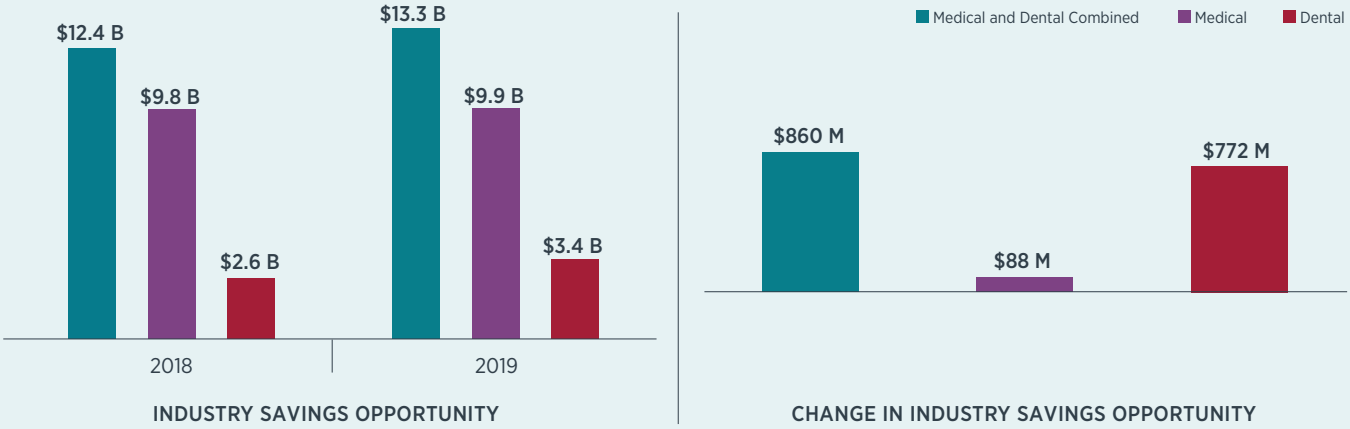
which, despite trailing the medical industry in electronic adoption, has made an effort to promote use of electronic transactions.

**Overall Volume Increased for the Medical and Dental Industries:** For both the medical and dental industries, overall transaction volume increased. Total transaction volume in the medical industry increased by 17 percent, with manual volume accounting for only seven percent of the total volume. Overall volume increased three percent for the dental industry. While manual volume remains the highest for the dental industry accounting for 44 percent of the total volume, electronic volume continues to increase.

**Moving from Partially Electronic to Fully Electronic Transactions Could Lead to Savings:** Although partially electronic transactions often cost less and are less time consuming than manual transactions, there are savings opportunities associated with moving from partially electronic web portals to fully electronic transactions. For the medical industry, $2.7 billion of the $9.9 billion total savings opportunity could be achieved by switching from partially electronic transactions to fully electronic transactions. The greatest per transaction savings opportunity for medical providers is prior authorization. Medical providers could save $2.11 per prior authorization transaction by using the federally mandated electronic standard rather than a web portal. Understanding the impact of portal use in more detail is important as the industry focuses on opportunities to decrease administrative costs and burden.

**Savings Opportunities Increased Slightly:** Overall, the potential industry savings opportunity increased from $12.4 billion to $13.3 billion as total industry transaction volume rose by 15 percent. For the medical industry, the savings opportunity remained relatively stable ($9.8 billion to $9.9 billion), while the dental industry savings opportunity increased by 31 percent, from $2.6 billion to $3.4 billion. The greatest opportunity for cost savings exists for medical and dental providers, with an $8.9 billion in savings opportunity for medical providers and a $2.9 billion in savings opportunity for dental providers.

**Figure 5: Industry Savings Opportunity and Year-Over-Year Change, 2018-2019 CAQH Index**




Note: From year to year reported transactions may change due to low volume collected. For example, in 2019, there are two additional transactions reported for the medical industry, attachments and coordination of benefits.

**Industry Automation has Resulted in Significant Cost Avoidance:** The 2019 CAQH Index estimates that the medical industry has avoided over $96 billion in annual administrative costs through efforts to automate administrative transactions. By comparison, the dental industry has avoided over $6 billion annually. For both industries, the largest annual savings has been achieved for eligibility and benefit verification at $68.8 billion for the medical industry and $3 billion for the dental industry. However, although the industry has already avoided significant administrative costs through automation, 33 percent of existing spending could be saved through further automation.

To continue to drive progress, harmonization is needed across all stakeholders to reduce administrative costs and burden. Aligning on a common understanding of the barriers to electronic adoption and the business needs of the future is imperative for plans, providers, vendors, standards development organizations, operating rule authoring entities and government to maintain and improve upon industry achievements to date.

# The Administrative Workflow

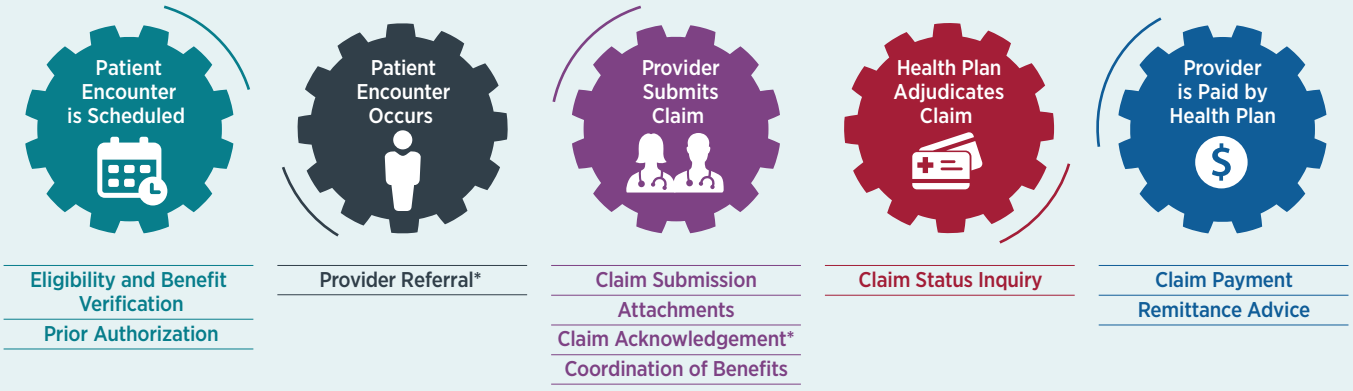
The business of healthcare can be complex and includes various administrative transactions that are conducted routinely between medical and dental plans and providers before, during and after a patient-provider encounter. The CAQH Index collects detailed information on how specific administrative transactions are conducted (modes studied include fully electronic, partially electronic and manual), how many are conducted (volume) and the cost and time to process each transaction. This information is used to calculate administrative spending and savings opportunities for providers and plans across the medical and dental industries. Understanding the workflow associated with administrative transactions, the level of spending and potential savings opportunities allows the healthcare industry to identify pain points and target areas for improvement. By streamlining processes through automation, the industry can reduce the time and cost associated with administrative transactions.

This year, the CAQH Index delivers deeper insight into the costs and savings opportunities associated with administrative transactions. For the first time, estimated costs and savings for partially electronic transactions are reported alongside those of electronic and manual transactions. Tables 1 and 2 list the average cost per transaction by mode and the associated cost savings opportunities for plans, providers and the medical and dental industries to move from manual and partially electronic transactions to fully electronic transactions. The medical industry could save as much as $42.45 (including $29.27 for providers and $13.18 for plans) for a single patient encounter requiring all eight of the transactions tracked by using a fully electronic workflow. The dental industry could save as much as $30.08 (including $22.99 for providers and $7.09 for plans) for a single patient encounter requiring all five of the transactions tracked using a fully electronic workflow.

The greatest per transaction savings opportunities associated with moving from a manual to a fully electronic transaction for the medical industry include prior authorization ($12.31), claim status inquiry ($7.72) and eligibility and benefit verification ($7.55). Claim status inquiry ($10.23) and eligibility and benefit verification ($9.33) also had the greatest per transaction savings opportunities for the dental industry.

Savings also exist for transactions that are conducted using partially electronic web portals versus the fully electronic HIPAA standards. For example, medical providers could save, on average, $2.11 per transaction by completing a prior authorization using the HIPAA-mandated standard as opposed to a web portal.

**Figure 6: The Administrative Workflow**




Note: This diagram illustrates the administrative workflow in its simplest form. In practice, some transactions may occur multiple times or in multiple steps and be triggered by other events.
*Due to a low volume of data collected, the 2019 CAQH Index was unable to calculate benchmarks.

**Table 1: Average Cost per Transaction for Manual, Partial and Electronic Transactions and Savings Opportunity, Medical, 2019 CAQH Index**

| Transaction | Method | Plan Cost | Provider Cost | Industry Cost | Plan Savings Opportunity | Provider Savings Opportunity | Industry Savings Opportunity |
|---|---|---|---|---|---|---|---|
| Eligibility and Benefit Verification | Manual | $3.47 | $5.30 | $8.77 | $3.43 | $4.12 | $7.55 |
| | Partial | $0.04 | $2.03 | $2.07 | $0.00 | $0.85 | $0.85 |
| | Electronic | $0.04 | $1.18 | $1.22 | | | |
| Prior Authorization | Manual | $3.32 | $10.92 | $14.24 | $3.27 | $9.04 | $12.31 |
| | Partial | $0.05 | $3.99 | $4.04 | $0.00 | $2.11 | $2.11 |
| | Electronic | $0.05 | $1.88 | $1.93 | | | |
| Claim Submission | Manual | $0.92 | $3.30 | $4.22 | $0.83 | $2.33 | $3.16 |
| | Electronic | $0.09 | $0.97 | $1.06 | | | |
| Attachments | Manual | $0.56 | $4.50 | $5.06 | $0.34 | $2.17 | $2.51 |
| | Electronic | $0.22 | $2.33 | $2.55 | | | |
| Coordination of Benefits | Manual | $1.05 | N/A | $1.05 | $0.87 | | $0.87 |
| | Partial | $0.18 | N/A | $0.18 | $0.00 | | $0.00 |
| | Electronic | $0.18 | N/A | $0.18 | | | |
| Claim Status Inquiry | Manual | $3.48 | $6.65 | $10.13 | $3.44 | $4.28 | $7.72 |
| | Partial | $0.04 | $2.25 | $2.29 | $0.00 | ($0.12) | ($0.12) |
| | Electronic | $0.04 | $2.37 | $2.41 | | | |
| Claim Payment | Manual | $0.67 | $2.51 | $3.18 | $0.59 | $1.00 | $1.59 |
| | Electronic | $0.08 | $1.51 | $1.59 | | | |
| Remittance Advice | Manual | $0.46 | $3.76 | $4.22 | $0.41 | $2.55 | $2.96 |
| | Partial | $0.05 | $2.15 | $2.20 | $0.00 | $0.94 | $0.94 |
| | Electronic | $0.05 | $1.21 | $1.26 | | | |

N/A = Not Applicable

Note: Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. Does not include system costs. All participants were asked to report cost for each transaction by the three modes of completion (manual, partial electronic, electronic). For some transactions, partial costs were not reported.

**Table 2: Average Cost per Transaction for Manual, Partial and Electronic Transactions and Savings Opportunity, Dental, 2019 CAQH Index**

| Transaction | Method | Plan Cost | Provider Cost | Industry Cost | Plan Savings Opportunity | Provider Savings Opportunity | Industry Savings Opportunity |
|---|---|---|---|---|---|---|---|
| Eligibility and Benefit Verification | Manual | $3.25 | $8.07 | $11.32 | $3.22 | $6.11 | $9.33 |
| | Partial | $0.03 | $2.62 | $2.65 | $0.00 | $0.66 | $0.66 |
| | Electronic | $0.03 | $1.96 | $1.99 | | | |
| Claim Submission | Manual | $0.47 | $4.31 | $4.78 | $0.37 | $2.94 | $3.31 |
| | Electronic | $0.10 | $1.37 | $1.47 | | | |
| Claim Status Inquiry | Manual | $3.25 | $9.01 | $12.26 | $3.22 | $7.01 | $10.23 |
| | Partial | $0.03 | $2.43 | $2.46 | $0.00 | $0.43 | $0.43 |
| | Electronic | $0.03 | $2.00 | $2.03 | | | |
| Claim Payment | Manual | $0.18 | $4.31 | $4.49 | $0.17 | $2.34 | $2.51 |
| | Electronic | $0.01 | $1.97 | $1.98 | | | |
| Remittance Advice | Manual | $0.13 | $5.35 | $5.48 | $0.11 | $3.57 | $3.68 |
| | Partial | $0.02 | $1.71 | $1.73 | $0.00 | ($0.07) | ($0.07) |
| | Electronic | $0.02 | $1.78 | $1.80 | | | |

Note: Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. Does not include system costs. All participants were asked to report cost for each transaction by the three modes of completion (manual, partial electronic, electronic). For some transactions, partial costs were not reported.

Dental providers could save 66 cents per transaction by conducting an eligibility and benefit verification using the mandated electronic standard instead of a web portal. The potential for electronic standards to deliver sizable cost savings as compared to web portals demonstrates the benefit that full automation offers, a particularly important insight given that web portals may be viewed as a bridge from manual to fully electronic transactions.

The CAQH Index also tracks trends in the number of transactions conducted. As shown in Tables 3 and 4, the highest volume transaction for the medical and dental industries is eligibility and benefit verification. In combination with the per transaction cost savings opportunity, eligibility and benefit verification represents 43 percent of the total savings potential for the medical industry and offers the highest savings opportunities for both medical plans and providers. In the dental industry, eligibility and benefit verification represents 29 percent of the total savings potential and has the highest savings opportunity for dental providers and the second highest savings opportunity for dental plans after claim status inquiry.

This report provides information on the trends in adoption, volume, cost and time associated with transactions completed along the administrative workflow. As the healthcare industry continues to evolve, recognizing and understanding the administrative workflow and the efficiencies that can be gained can help the industry focus its efforts on reducing administrative burden.

**Table 3: Estimated National Volume per Transaction and Savings Opportunity, Medical, 2019 CAQH Index (in millions)**

| Transaction | Method | Plan National Volume | Provider National Volume | Plan National Savings Opportunity | Provider National Savings Opportunity | Industry National Savings Opportunity |
|---|---|---|---|---|---|---|
| | | (in millions) | | (in millions $) | | |
| Eligibility and Benefit Verification | Manual | 110 | 653 | $378 | $3,864 | $4,242 |
| | Partial | 1,471 | 1,388 | | | |
| | Electronic | 8,093 | 7,633 | | | |
| Prior Authorization | Manual | 30 | 27 | $99 | $355 | $454 |
| | Partial | 50 | 52 | | | |
| | Electronic | 12 | 13 | | | |
| Claim Submission | Manual | 155 | 217 | $128 | $507 | $635 |
| | Electronic | 3,486 | 3,424 | | | |
| Attachments | Manual | 142 | 150 | $48 | $326 | $374 |
| | Electronic | 35 | 27 | | | |
| Coordination of Benefits | Manual | 18 | N/A | $16 | | $16 |
| | Partial | * | N/A | | | |
| | Electronic | 116 | N/A | | | |
| Claim Status Inquiry | Manual | 67 | 457 | $231 | $1,931 | $2,162 |
| | Partial | 305 | 203 | | | |
| | Electronic | 858 | 571 | | | |
| Claim Payment | Manual | 146 | 49 | $86 | $49 | $135 |
| | Electronic | 333 | 430 | | | |
| Remittance Advice | Manual | 71 | 167 | $29 | $1,822 | $1,851 |
| | Partial | 1,535 | 1,489 | | | |
| | Electronic | 1,689 | 1,638 | | | |
| **Transaction Total** | **Manual** | **739** | **1,720** | **$1,015** | **$8,854** | **$9,869** |
| | **Partial** | **3,361** | **3,132** | | | |
| | **Electronic** | **14,622** | **13,736** | | | |

*Partial transaction volume is less than one million.

N/A = Not Applicable

Note: Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. Does not include system costs. All participants were asked to report cost for each transaction by the three modes of completion (manual, partial electronic, electronic). For some transactions, partial costs were not reported.

**Table 4: Estimated National Volume per Transaction and Savings Opportunity, Dental, 2019 CAQH Index (in millions)**

| Transaction | Method | Plan National Volume | Provider National Volume | Plan National Savings Opportunity | Provider National Savings Opportunity | Industry National Savings Opportunity |
|---|---|---|---|---|---|---|
| | | (in millions) | | (in millions $) | | |
| Eligibility and Benefit Verification | Manual | 58 | 116 | $186 | $792 | $978 |
| | Partial | 149 | 125 | | | |
| | Electronic | 219 | 184 | | | |
| Claim Submission | Manual | 83 | 50 | $30 | $147 | $177 |
| | Electronic | 341 | 374 | | | |
| Claim Status Inquiry | Manual | 61 | 61 | $196 | $476 | $672 |
| | Partial | 120 | 120 | | | |
| | Electronic | 22 | 22 | | | |
| Claim Payment | Manual | 305 | 312 | $51 | $729 | $780 |
| | Electronic | 46 | 40 | | | |
| Remittance Advice | Manual | 240 | 217 | $25 | $774 | $799 |
| | Partial | 4 | 34 | | | |
| | Electronic | 69 | 62 | | | |
| **Transaction Total** | **Manual** | **747** | **756** | **$488** | **$2,918** | **$3,406** |
| | **Partial** | **273** | **279** | | | |
| | **Electronic** | **697** | **682** | | | |

Note: Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. Does not include system costs. All participants were asked to report cost for each transaction by the three modes of completion (manual, partial electronic, electronic). For some transactions, partial costs were not reported.

# FINDINGS

## Eligibility and Benefit Verification

Prior to each patient encounter, healthcare providers typically verify a patient's insurance coverage and benefit status, gathering up-to-date information about deductibles, copayments and co-insurance. The process also gives providers information on coverage of specific services and any benefit limitations, exclusions or cost-sharing requirements. This information may be used to inform patient-provider conversations about treatment options.

Although a very small proportion of eligibility and benefit verifications are conducted manually, this transaction represents the highest annual spending and savings opportunity. This is due to the large overall volume of this transaction and the volume conducted through partially electronic web portals.

### ADOPTION

For medical plans, fully electronic eligibility and benefit verification adoption remained fairly stable at 84 percent, dropping one percentage point after increasing six percentage points from the previous report. Partially electronic transactions increased two percentage points after experiencing a five percentage point decrease in the 2018 CAQH Index. Manual transactions dropped to a level that is approaching undetectable.

**Electronic Eligibility and Benefit Verification**

**$5.2 Billion in Potential Savings Annually for the Medical and Dental Industries Combined**


By comparison, electronic adoption by dental plans was significantly lower than for medical, at 51 percent, despite a five percentage point increase from the previous report. Dental plans continue to recover from an eight percentage point loss in electronic adoption from 2017 to 2018. Manual transactions also declined by three percentage points from 2018.

Although partially electronic transactions decreased from the previous report, the dental industry relies more heavily on web portals than the medical industry. In a letter to the Centers for Medicare and Medicaid Services (CMS), the American Dental Association (ADA) indicated that, while the use of unique payer portals has improved efficiency in the dental industry, rising complexity of information sharing and multiple portals with unique formatting or logins have resulted in new administrative burdens.[7]

7 "ADA proposes 5 solutions in CMS information request for reducing paperwork," ADA News Archive, American Dental Association, July 31, 2019, https://www.ada.org/en/publications/ada-news/2019-archive/july/ada-proposes-5-solutions-in-cms-information-request-for-reducing-paperwork.

**Figure 7: Medical and Dental Plan Adoption of Eligibility and Benefit Verification, 2017-2019 CAQH Index**

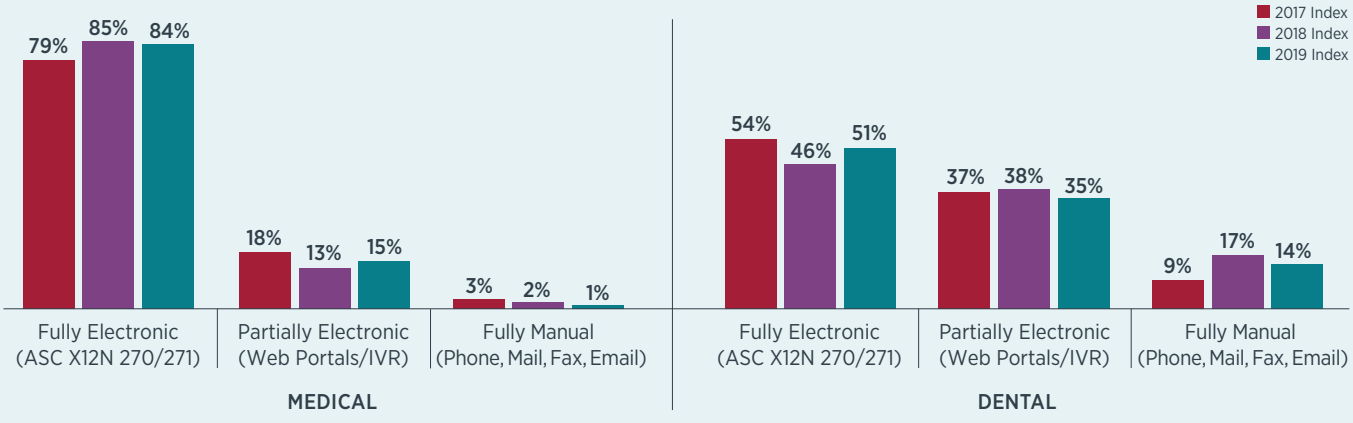
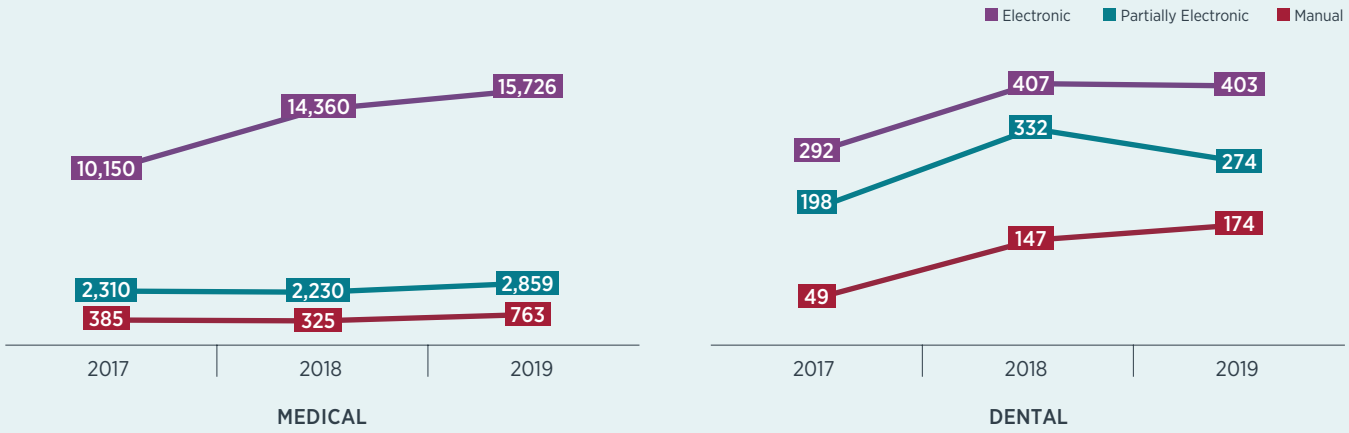


**Figure 8: Estimated National Volume of Eligibility and Benefit Verifications, by Mode, 2017-2019 CAQH Index (in millions)**




Note: Data represents plans and providers.

To help reduce these administrative burdens, dental stakeholders convened by the National Dental Electronic Data Interchange Council (NDEDIC) have discussed pain points and developed best practice guidance to improve adoption of the ASC X12 270/271 HIPAA-mandated electronic eligibility and benefit verification transaction.[8] CAQH CORE is working with these dental stakeholders to consider potential future operating rules to further support the dental industry.

## VOLUME

Eligibility and benefit verification continued to be the highest volume transaction measured in the medical industry, and its use continued to grow. Medical industry volume rose by 14 percent from the previous report. The number of transactions per member also increased from 26 annually to 30 – still the highest number per member of all medical transactions measured.

Conversely, the total number of eligibility and benefit transactions conducted in the dental industry decreased by four percent. However, this transaction remained the highest volume dental transaction studied. The number of dental transactions per member remained stable at two transactions conducted annually.

Both medical plans and providers have reported that the increase in transaction volume is partly related to the increasing number, variation and complexity of health insurance benefit plans and that this complexity may result in more manual interventions. Dental plans and providers also expressed the need for manual interventions when addressing some of the unique needs and requirements of the dental industry.

## ESTIMATED SPEND AND SAVINGS POTENTIAL

### Spend

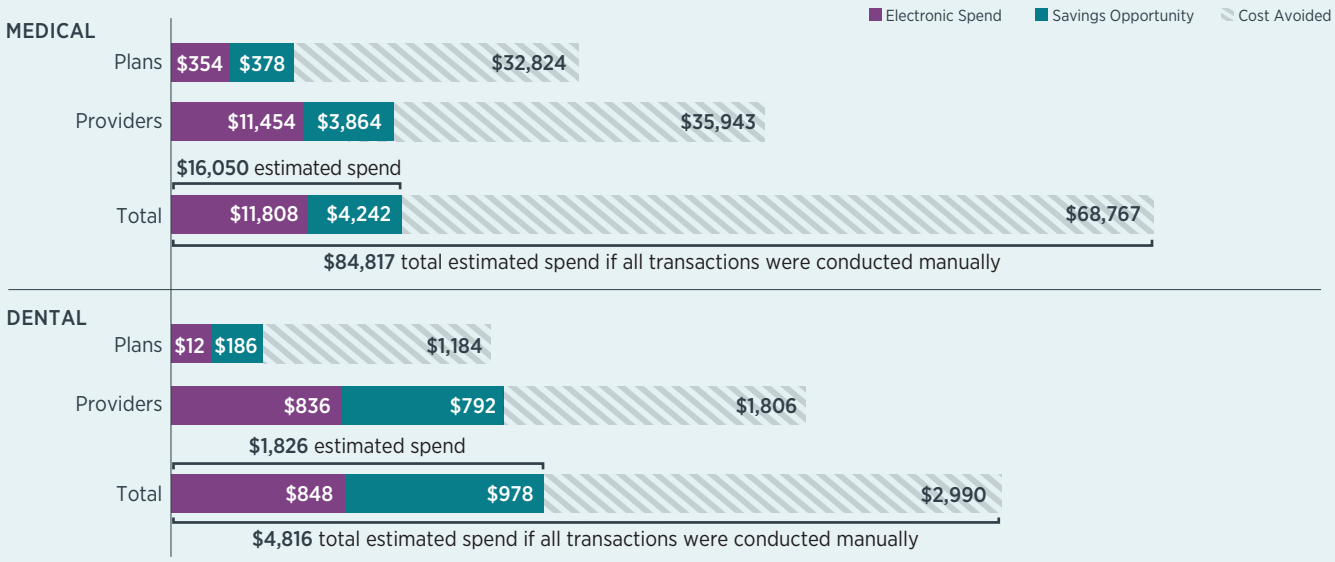
The medical and dental industries combined spent nearly $18 billion on eligibility and benefit verification. This is the highest spending level among all transactions studied. The amount accounted for 47 percent of total medical industry spend and 28 percent of total dental industry spend. For both industries, provider spending accounted for much of the total spending - 95 percent of medical and 89 percent of dental spending. Providers have indicated that complicated benefits have resulted in additional points of contact with plans as providers check on a patient's eligibility and benefits multiple times throughout a patient encounter.

### Savings Potential

Although the medical and dental industries spent nearly $18 billion on eligibility and benefit verification, roughly

8 "Best Practice Guidance on Eligibility & Benefits Transactions for Dental Providers & Payers Companion to ASC X12 270/271," NDEDIC Products, National Dental EDI Council, accessed December 22, 2019, https://ndedic.org/Sys/Store/Products/1016.

**Figure 9: Eligibility and Benefit Verification: How Much is Being Spent and How Much More Can Be Saved With Full Adoption? 2019 CAQH Index (in millions)**




Note: May not be drawn to scale.

$72 billion in total costs have been avoided on an annual basis by moving from manual to electronic transactions. An additional $5.2 billion can be saved annually across both industries by converting the remaining manual and partially electronic web portal transactions to fully electronic transactions. This is the largest single transaction savings opportunity identified by the 2019 CAQH Index. Available to both the medical and dental industries, the potential savings represents 26 percent of existing spending by the medical industry and 54 percent of existing spending by the dental industry. The vast majority of this savings opportunity, over $4.6 billion, exists for providers.

While only 15 percent of medical transactions were conducted via a web portal as partially electronic, there is a sizable savings opportunity by moving to fully electronic transactions. The industry could save 85 cents per transaction by conducting eligibility and benefit verifications electronically using the HIPAA standard as opposed to a web portal. This switch would result in an annual savings opportunity of $1.2 billion. Similarly, the dental industry could save 66 cents per transaction by moving from a partially electronic web portal to a fully electronic transaction. This switch would result in an annual savings of $83 million.

### Time

By boosting fully electronic eligibility and benefit verification adoption, providers would not only achieve cost savings, but also decrease their time spent conducting verifications. On average, medical providers spend eight more minutes performing manual transactions compared to electronic transactions. When conducted electronically, eligibility and benefit verification transactions require only two minutes on average compared to ten minutes manually.

For the dental industry, eligibility and benefit verification was the second most time consuming transaction when conducted manually. On average,

**Electronic Eligibility and Benefit Verification**

**Potential Average Time Savings (per transaction):**

**Medical Industry:**
**8 Minutes**

**Dental Industry:**
**10 Minutes**

dental providers spent 14 minutes conducting this transaction manually compared to four minutes electronically. Transitioning to a more automated process for eligibility and benefit verification can facilitate the reimbursement process for dental providers by reducing costs and collection time, while dental plans can spend less time responding to inquiries from providers and patients.[9]

Time savings also exist when conducting a transaction electronically as compared to using web portals. Medical providers can save three minutes and dental providers can save one minute by moving from partially electronic web portals to fully electronic transactions.

9 "NDEDIC Simplifies Dental Industry Implementation of Eligibility & Benefit Inquiry & Response (270/271) Transactions with New Guidance Document," Newswire, July 6, 2016, https://www.newswire.com/news/ndedic-simplifies-dental-industry-implementation-of-eligibility-benefit-4984427.

## CAQH CORE Operating Rules Underway to Communicate Provider Attribution

In 2019, CAQH CORE launched a multi-stakeholder Value-based Payment (VBP) Advisory Group that evaluated administrative pain points associated with VBP and prioritized opportunities for administrative simplification. The group, which represented executive leaders from health plans, providers, vendors, government entities and other industry experts, identified the need to communicate how patients are attributed to providers as the top priority. Operating rule development efforts are currently underway to facilitate the communication of patient/provider attribution at the time of an eligibility check through the existing eligibility and benefit verification transaction.

For more information, visit: https://www.caqh.org/core/value-based-payments

## Prior Authorization

Prior authorization, or pre-authorization, is a process required by a plan for gaining access to certain benefits of a patient's health plan, such as coverage of specific procedures, medications or medical devices. Prior authorization is used to manage the quality, safety and cost of healthcare services provided to patients.

Although an electronic standard for prior authorization has been in place since the early 2000s, industry adoption remains low relative to other federally mandated electronic transactions. Barriers such as provider awareness, vendor support, inconsistent use of data content allowed in the standard, state laws mandating manual processes and lack of an attachment standard to support exchange of medical documentation have prevented or slowed adoption.[10]

Given that prior authorization is the costliest and most time consuming transaction to conduct manually, a growing number of public and private sector initiatives are focused on reducing overall administrative burden associated with prior authorization. The U.S. Department of Health and Human Services (HHS) through the Office of the National Coordinator for Health IT (ONC) and CMS have jointly acknowledged challenges associated with prior authorization and are collaborating on strategies to ease the burden associated with this transaction.[11] The U.S. Congress and a number of state legislatures have also considered legislative solutions.[12]

**Electronic Prior Authorization**

**$454 Million in Potential Annual Savings for the Medical Industry**


CAQH CORE recently approved two sets of operating rules to support consistent use of data content in the electronic standard and to establish national requirements for response times associated with prior authorization requests.[13] In addition, a number of prior authorization initiatives are underway with various health plan associations, provider associations and standards development organizations to improve the prior authorization process.[14]

10 "Moving Forward: Building Momentum for End-to-End Automation of the Prior Authorization Process," CAQH CORE, accessed December 22, 2019, https://www.caqh.org/sites/default/files/core/white-paper/CAQH-CORE-Automating-Prior-Authorization.pdf.

11 Strategy on Reducing Burden Relating to the Use of Health IT and EHRs, HealthIT.gov website, accessed December 22, 2019, https://www.healthit.gov/topic/usability-and-provider-burden/strategy-reducing-burden-relating-use-health-it-and-ehrs.

Health IT Advisory Committee, HealthIT.gov website, accessed December 22, 2019, https://www.healthit.gov/hitac/committees/health-information-technology-advisory-committee-hitac.

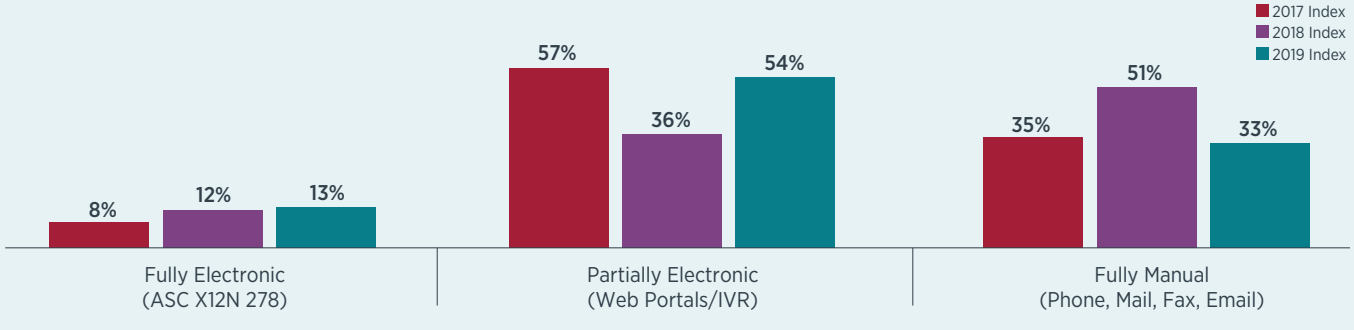
12 For example: Improving Seniors' Timely Access to Care Act of 2019, H.R. 3107, 116th Cong. (2019).

2018 Prior Authorization State Law Chart, AMA website, accessed July 10, 2019, https://www.ama-assn.org/sites/ama-assn.org/files/corp/media-browser/public/arc-public/pa-state-chart.pdf.

13 "CAQH CORE Phase V Operating Rules," Operating Rules, CAQH CORE, accessed December 22, 2019, https://www.caqh.org/core/caqh-core-phase-v-operating-rules.

14 "Moving Forward: Building Momentum for End-to-End Automation of the Prior Authorization Process," CAQH CORE, accessed December 22, 2019, https://www.caqh.org/sites/default/files/core/white-paper/CAQH-CORE-Automating-Prior-Authorization.pdf.

**Figure 10: Medical Plan Adoption of Prior Authorization, 2017-2019 CAQH Index**



## ADOPTION

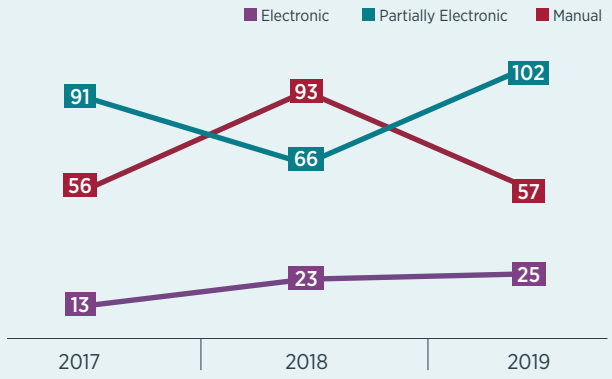
Electronic prior authorization adoption by medical plans remained low relative to other administrative transactions with only a one percentage point increase in electronic adoption compared to the prior report. Partially electronic web portal utilization rose by almost 20 percentage points after a 21 percentage point decline, while manual use decreased 18 percentage points. Medical plans have reported that this shift in partially electronic versus manual utilization is the result of concerted efforts to encourage providers to submit prior authorization requests through plan specific portals.

## VOLUME

Prior authorization remained one of the lowest volume transactions studied, with only a slight overall volume increase of one percent after a 14 percent rise in 2018. Although some medical plans reported a reduction in the number of services requiring prior authorization in the past year, prior authorization continues to be a growing challenge for 9 out of 10 physicians.[15] Medical plans also indicated that new innovation in certain service categories will result in increasing prior authorization volumes in the near future.

15 Claire Mansbach,"Prior authorization pains growing for 9/10 physician practices," Medical Group Management Association, accessed January 9, 2020, https://www.mgma.com/data/data-stories/prior-authorization-pains-growing-for-9-10-physici.

**Figure 11: Estimated National Volume of Prior Authorizations, Medical, by Mode, 2017-2019 CAQH Index (in millions)**




Note: Data represents plans and providers.

## ESTIMATED SPEND AND SAVINGS POTENTIAL

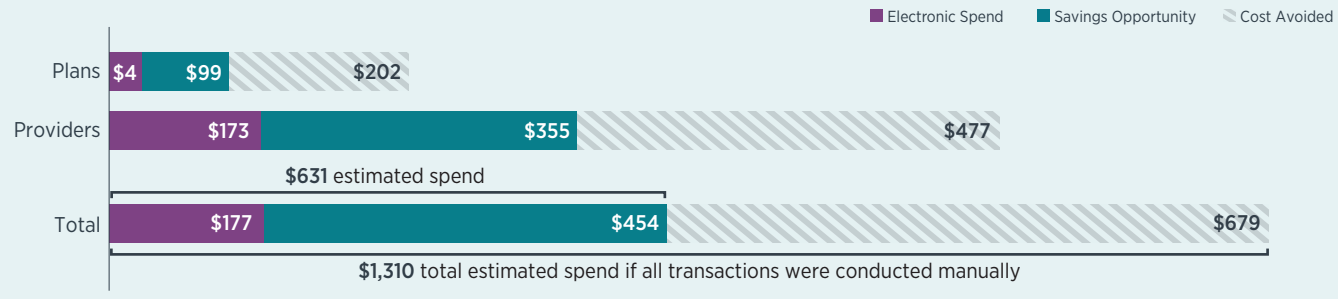
### Spend

While spending on prior authorization constitutes only two percent of the overall medical industry transaction spend ($631 million), prior authorization is the most costly, time consuming administrative transaction for providers. On average, providers spent almost $11 per transaction to conduct a prior authorization manually and nearly $4 using a web portal.

### Savings Potential

The medical industry could save an additional $454 million annually by transitioning to fully electronic

**Figure 12: Prior Authorization: How Much is Being Spent and How Much More Can Be Saved With Full Adoption? 2019 CAQH Index (in millions)**




Note: May not be drawn to scale.

transactions. The opportunity for savings is greater for providers versus plans, with a savings opportunity of $355 million for providers and $99 million for plans. This savings opportunity is on top of the $679 million in annual costs that the industry has already avoided spending, primarily through the use of web portals. However, moving from web portals to fully electronic transactions could reduce physician burden by $2.11 per transaction.

### Time

Providers indicated that manual prior authorizations were the most time consuming transactions. On average, a manual prior authorization required 21 minutes of provider staff time, while electronic prior authorization transactions required four minutes. Some providers reported that their staff spent as much as 45 minutes to conduct a manual prior authorization and as much as 18 minutes to complete an electronic prior authorization.

**Electronic Prior Authorization**

**Potential Average Time Savings for Medical Industry (per transaction): 17 Minutes**

Conducting prior authorizations via a web portal consumed eight minutes of provider staff time, significantly less than the time needed to complete a prior authorization manually and four minutes more than the time needed to complete a fully electronic prior authorization transaction.

## New CAQH CORE Operating Rules to Automate and Accelerate Prior Authorization

In May 2019, CAQH CORE adopted the Phase V Prior Authorization Operating Rules to reduce the manual back and forth between providers and health plans and support auto adjudication. These rules specify data content requirements for patient identification, error/action codes, communicating with providers regarding needed information/clinical documentation, status/next steps and decision reasons. These data content rules apply to the HIPAA-mandated 5010X217 278 prior authorization transaction as well as web portals.

In January 2020, CAQH CORE adopted updates to the Phase IV Prior Authorization Infrastructure Operating Rule related to response times. Under this rule the following maximum timeframes are required for at least 90 percent of prior authorizations conducted using the HIPAA-mandated transaction: 1) time requirement of two business days for a health plan to request any documentation from a provider, 2) time requirement of two business days for a health plan to send a final determination once all requested documentation has been received, and 3) an optional time requirement of 15 business days for a health plan to close out a prior authorization request if documentation requested from a provider has not been received.

In early 2020, the CAQH CORE Board will determine a rule package to present to the National Committee on Vital and Health Statistics (NCVHS) for recommendation to the Department of Health and Human Services (HHS) for national adoption under HIPAA. The rule package will include CAQH CORE Prior Authorization Operating Rules.

## Claim Submission

Claim submission occurs after a patient encounter. Providers may submit a claim directly to a health plan, or a claim may be routed through intermediary billers and clearinghouses. Information on the claim includes patient demographics, diagnosis, services provided and the cost of treatment.

For both the medical and dental industries, claim submission continues to have the highest electronic adoption rate among the transactions studied. Although adoption by the dental industry remains lower than medical, dental adoption has increased year over year and has the potential for continued growth. The medical industry has maintained a high electronic adoption which is critical to sustain in order to control costs.

### ADOPTION

Medical plan adoption of electronic claim submissions remained steady at 96 percent as compared to the prior report. Given the stable trend in the adoption of electronic transactions for claim submission, this achievement suggests that the medical industry may be approaching a threshold that effectively represents full adoption of electronic claim submission. Dental plans have shown slight increases in adoption year over year, reaching 80 percent, yet there is still room to improve and reach a level similar to that achieved by medical plans.

**Electronic Claim Submission**

**$812 Million in Potential Savings Annually for the Medical and Dental Industries Combined**

**Medical Industry: $635 M**

**Dental Industry: $177 M**


### VOLUME

The volume of medical claim submissions increased by 14 percent, while dental industry volume rose by four percent. Both industries saw an increase in electronic transactions, while manual transactions increased for medical and continued to decrease for dental.

Per member volume for the medical industry increased slightly from ten transactions per member annually to 11 transactions per member annually. The number of transactions conducted per member annually remains the second highest of the transactions reported. Dental industry volume remained stable at two transactions per member annually.

**Figure 13: Medical and Dental Plan Adoption of Claim Submission, 2017-2019 CAQH Index**

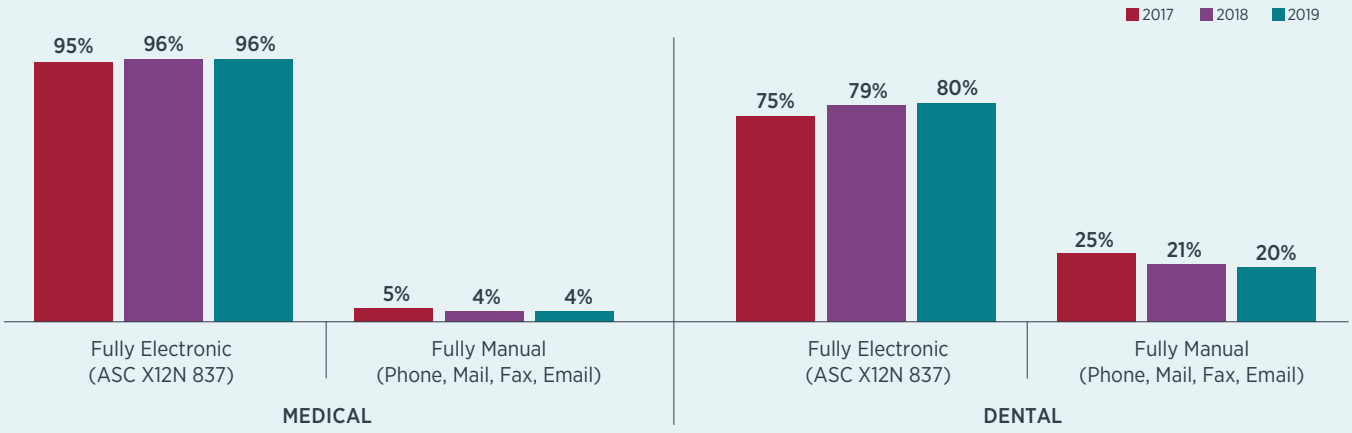
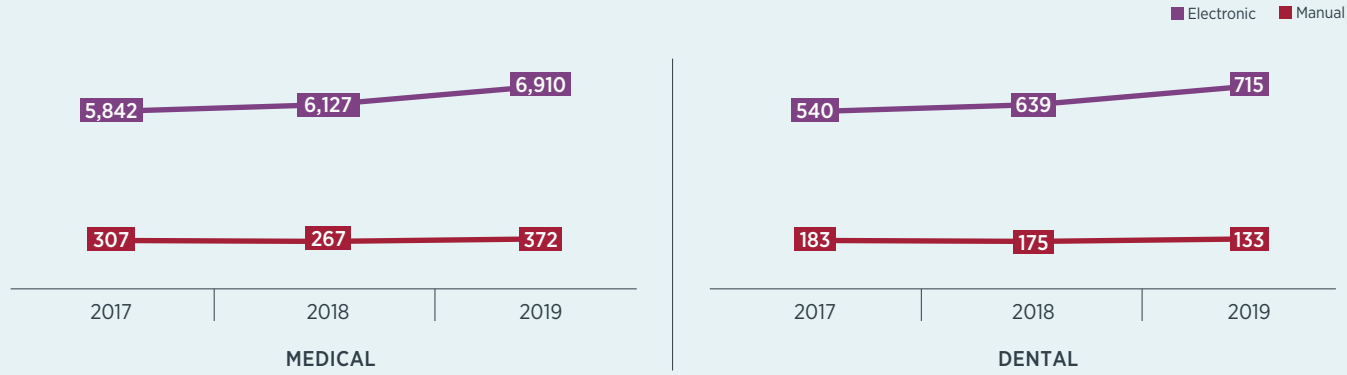


**Figure 14: Estimated National Volume of Claim Submissions, by Mode, 2017-2019 CAQH Index (in millions)**




Note: Data represents plans and providers.

## ESTIMATED SPEND AND SAVINGS POTENTIAL

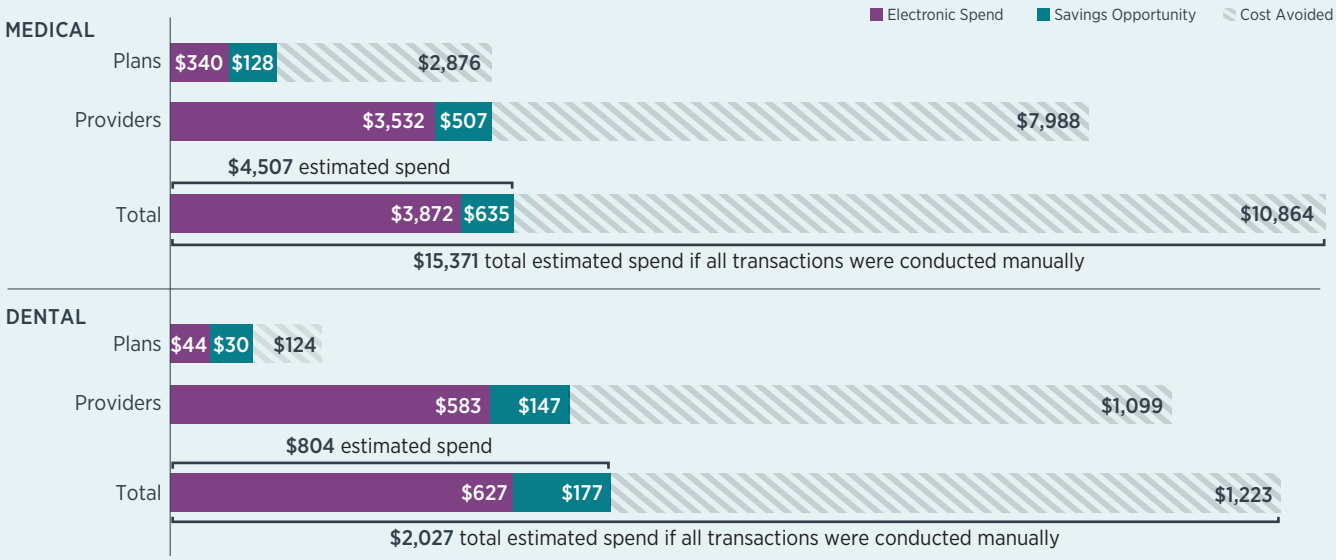
### Spend

The medical industry spent a total of $4.5 billion on claim submissions, representing 13 percent of the total medical industry spend on administrative transactions reported. By comparison, the dental industry spent $804 million on claim submissions, which represents 12 percent of the total dental industry spend. The cost of submitting an electronic claim was 97 cents for medical providers and $1.37 for dental providers, the lowest among the transactions studied.

### Savings Potential

Although electronic claim submission is the lowest cost transaction for providers in both industries, there is still a $635 million savings opportunity for the medical industry and $177 million for the dental industry by converting the remaining manual claim submissions to electronic transactions. Through automation, the medical and dental industries have avoided over $12 billion in total costs annually by transmitting claims primarily through the HIPAA-mandated electronic transaction.

**Figure 15: Claim Submission: How Much is Being Spent and How Much More Can Be Saved With Full Adoption? 2019 CAQH Index (in millions)**




Note: May not be drawn to scale.

### Time

Medical providers spent an average of six minutes to submit a claim manually and as little as two minutes to submit a claim electronically. Medical providers could save an average of four minutes per transaction if they switched from completing a claim submission manually to electronically.

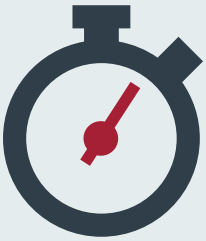
Dental providers reported spending an average of seven minutes to submit a claim manually, which is the lowest manual time reported across all transactions. Dental providers could save, on average, four minutes by conducting a claim submission electronically.

**Electronic Claim Submission**

**Potential Average Time Savings (per transaction):**

**Medical Industry:**
**4 Minutes**

**Dental Industry:**
**4 Minutes**



## CAQH CORE to Assess Potential of Using Claim Submission to Streamline Quality Measure Reporting

CAQH CORE launched a multi-stakeholder Value-based Payment (VBP) Advisory Group in 2019 that evaluated administrative pain points associated with value-based payments and prioritized opportunities for administrative simplification. These executive leaders, who represented health plans, providers, vendors, government entities and other industry experts, prioritized the potential to require expanded code set (e.g. LOINC or CPT II) inclusion within a healthcare claim to satisfy up to 75 percent of quality measure reporting as an opportunity for CAQH CORE to explore.

In a fee-for-service (FFS) system, the healthcare claim is used by a provider to tell a health plan what services have been provided. However, in VBP models, the outcome of that service is often just as important to satisfy care gaps, quality measures and/or performance metrics.

In 2020, CAQH CORE will initiate a pilot evaluating the value of requiring the use of expanded code sets on claim submissions to convey non-service-related clinical information to reduce the administrative burden associated with quality measure reporting.

## Attachments

The term "attachment" refers to the exchange of patient-specific medical information or supplemental documentation needed to support administrative transactions and clinical decisions. For claim submission and prior authorization, plans may need clinical information such as lab results, imaging scans, operative reports, discharge summaries or other supplemental documentation from a provider to verify that the service being billed or requested is consistent with medical policies.

Serving as a bridge between clinical and administrative data, attachments are also critical to the success of value-based payment models. As the healthcare industry transitions from fee-for-service to value-based payment, there is a clear need for clinical and administrative systems to streamline the exchange of information to support patients, providers and plans.

Attachments are currently exchanged through multiple methods and in various formats, with the majority exchanged through mail and fax. Information requested by plans and submitted by providers often employs manual processes to match an attachment to the correct administrative transaction, which can create complexity, unnecessary administrative expense and burden.[16]

16 "CAQH CORE Report on Attachments: A Bridge to a Fully Automated Future to Share Medical Documentation," CAQH CORE, accessed December 26, 2019, https://www.caqh.org/sites/default/files/core/core-attachments-environmental-scan-report.pdf.

**Electronic Attachments**

**$374 Million in Potential Annual Savings for the Medical Industry**


While most HIPAA-mandated electronic transaction standards have been federally adopted, an electronic transaction standard for attachments has not yet been named. The lack of a federal standard has deterred vendors, plans and providers from investing in solutions to automate the attachments workflow, resulting in high manual administrative burden associated with the exchange of medical documentation.

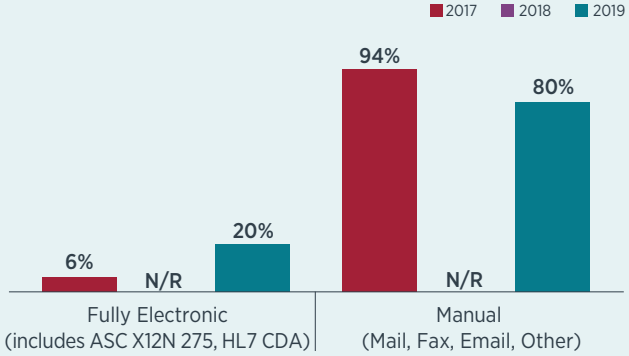
### ADOPTION

Medical plans reported an electronic adoption level of 20 percent for attachments across use cases associated with claims and prior authorization. Attachments have the second lowest electronic adoption rate among the transactions studied after prior authorization.

### VOLUME

Although attachments are primarily exchanged through costly and time consuming manual methods, the volume of these transactions is low, accounting for less than one percent of the total medical industry volume of administrative transactions.

**Figure 16: Medical Plan Adoption of Electronic Attachments, 2017-2019 CAQH Index**

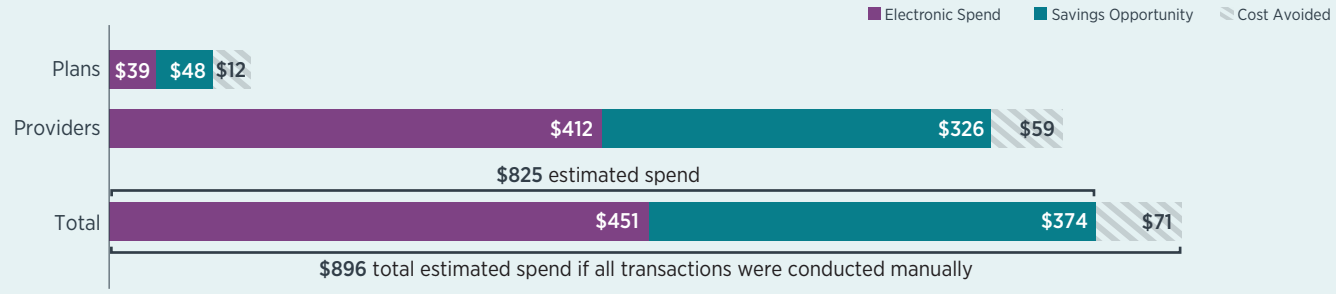



N/R = Not Reported
Note: No benchmarks reported for 2018 due to a low volume of contributed data.

**Figure 17: Estimated National Volume of Attachments, by Mode, 2017-2019 CAQH Index (in millions)**


N/R = Not Reported
Note: Data represents plans and providers.
No benchmarks reported for 2018 due to a low volume of contributed data.

**Figure 18: Attachments: How Much is Being Spent and How Much More Can Be Saved With Full Adoption? 2019 CAQH Index (in millions)**




Note: May not be drawn to scale.

## ESTIMATED SPEND AND SAVINGS POTENTIAL

### Spend

While the volume of attachments represents less than one percent of all medical industry administrative transaction volume, spending on attachments accounts for nearly 2.5 percent ($825 million) of all spending on administrative transactions for the medical industry. Over 89 percent of this spending on attachment processing is incurred by medical providers, who spend $4.50 on average for each manually processed attachment.

### Savings Potential

By switching from manual to electronic attachments, the medical industry could save $2.51 per transaction and an additional $374 million annually. This savings opportunity is over five times greater than the relatively small amount ($71 million) that the industry has already avoided spending annually by converting some manual attachments to electronic transactions.

### Time

On average, medical providers reported taking 11 minutes to submit an attachment manually compared to five minutes using an electronic method. Some providers reported that manual attachments can take up to 30 minutes.

*Note: Due to low volume of contributed data for this transaction in 2018, no benchmark is available for 2018. Benchmarks are available for claims and prior authorization attachments combined for 2019 and for claim attachments only for 2017.*

**Electronic Attachments**

**Potential Average Time Savings for Medical Industry (per transaction): 6 Minutes**

## CAQH CORE Proceeding on Operating Rules for Attachments

As the healthcare industry continues to wait for designation of a federal attachment standard, CAQH CORE has launched an effort to assess opportunities for operating rules to ease the administrative burden associated with the exchange of medical documentation. In late fall of 2019, CAQH CORE convened an advisory group of health plans, healthcare providers, utilization management organizations, electronic health records (EHR) companies, clearinghouses and government entities to identify and prioritize opportunities for the development of operating rules to support the electronic exchange of medical documentation to support administrative transactions. The Advisory Group prioritized a number of opportunities related to exchange formats (X12, webservice application program interfaces (API) like Fast Healthcare Interoperability Resources (FHIR), etc.), infrastructure (connectivity, response times, acknowledgements, system availability, etc.), workflows and data variability that will start to be addressed by work groups in 2020.

For more information, visit https://www.caqh.org/core/additional-medical-documentationattachments

## Coordination of Benefits

When a person is eligible for benefits under two or more health insurance plans at the same time, coordination of benefits (COB) is the process by which a health plan determines if it should be the primary or secondary payer of medical claims for a patient. The CAQH Index counts the number of COB claims, which are the claims health plans send to one another asking for coordination of payment toward a common member's care.

If benefit plans are not coordinated, there is a chance that a plan or patient could incur unnecessary costs or that a payment may become overdue, which can be harmful to both the patient and provider. When determining the order of benefits for a patient, reliability and speed can reduce paperwork and calls associated with denials, appeals and resubmissions.

### ADOPTION

The medical industry has seen a steady rise in plan adoption of fully electronic coordination of benefits while manual use has continued to decrease. Adoption increased by six percentage points, to 86 percent while use of manual transactions declined five percentage points. Use of partially electronic transactions continued to be very low. Adoption of electronic coordination of benefits has the second highest adoption rate and the fastest growth among the transactions.

**Electronic Coordination of Benefits**

**$16 Million in Potential Annual Savings for the Medical Industry**


### ESTIMATED SPEND AND SAVINGS POTENTIAL

#### Spend

The medical industry spent $41 million in one year conducting COB transactions. The spend associated with this transaction is the lowest among the medical industry administrative transactions reported.

#### Savings Potential

Medical plans could save an additional $16 million by switching their remaining manual COB transactions to electronic transactions. This savings opportunity is in addition to the $101 million that medical plans have already avoided spending on an annual basis by conducting COB transactions electronically versus manually.

**Figure 19: Medical Plan Adoption of Coordination of Benefits, 2017-2019 CAQH Index**

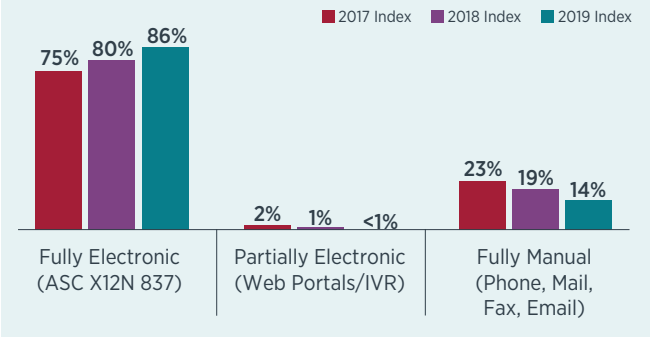
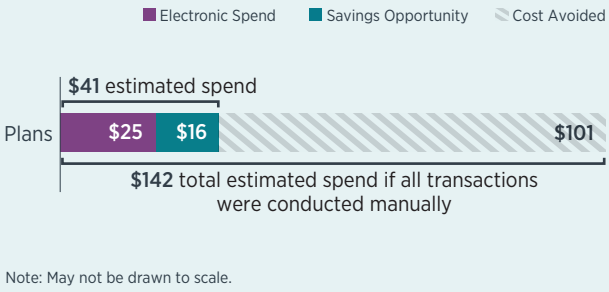



**Figure 20: Coordination of Benefits: How Much is Being Spent and How Much More Can Be Saved With Full Adoption? 2019 CAQH Index (in millions)**




Note: May not be drawn to scale.

## Claim Status Inquiry

Claim status inquiries are used by providers to inquire about the status of a claim and by plans to respond to the provider about the status of the claim. This transaction identifies where a claim is in the processing cycle (paid, denied, pending) and allows for tracking to occur.

While electronic solutions exist to support the transaction and providers have indicated that conducting the transaction via phone and fax is burdensome, provider manual volume increased for both the medical and dental industries. In some cases, such as when providers do not receive an acknowledgement of a submitted claim or when a problem arises, providers resort to calling the plan to determine the status of the claim. This results in burden for both the provider and plan.

### ADOPTION

Medical plan adoption of the electronic claim status inquiry decreased slightly, by one percentage point, from the previous report to 70 percent. Partially electronic transactions increased three percentage points while manual transactions saw a two percentage point decrease. Claim status inquiry is one of two transactions that reported a slight decrease in electronic adoption.

Conversely, dental plans experienced a two percentage point increase in electronic adoption of claim status inquiries, while portal use remained stable at 59 percent. Manual adoption decreased by three percentage points.

**Electronic Claim Status Inquiry**

**$2.8 Billion in Potential Savings Annually for the Medical and Dental Industries Combined**

**Medical Industry: $2.2 B**

**Dental Industry: $672 M**


### VOLUME

Claim status volume declined for the second year in a row in the medical industry, falling five percent over the prior report. The decrease in volume is driven by a 22 percent decline in electronic transaction volume primarily from providers. The reduction in claim status volume is partially the result of providers now only checking on the status of a claim after a minimum of 30 days versus more frequently, which may be due to quicker adjudications and payments from plans.

Partially electronic volume also decreased ten percent, while manual volume in the medical industry increased. The continuing decline in claim status volume may also be reflective of the move to value-based payment. Providers are using new workflows to optimize the revenue cycle, leveraging a range of technologies

**Figure 21: Medical and Dental Plan Adoption of Claim Status Inquiry, 2017-2019 CAQH Index**

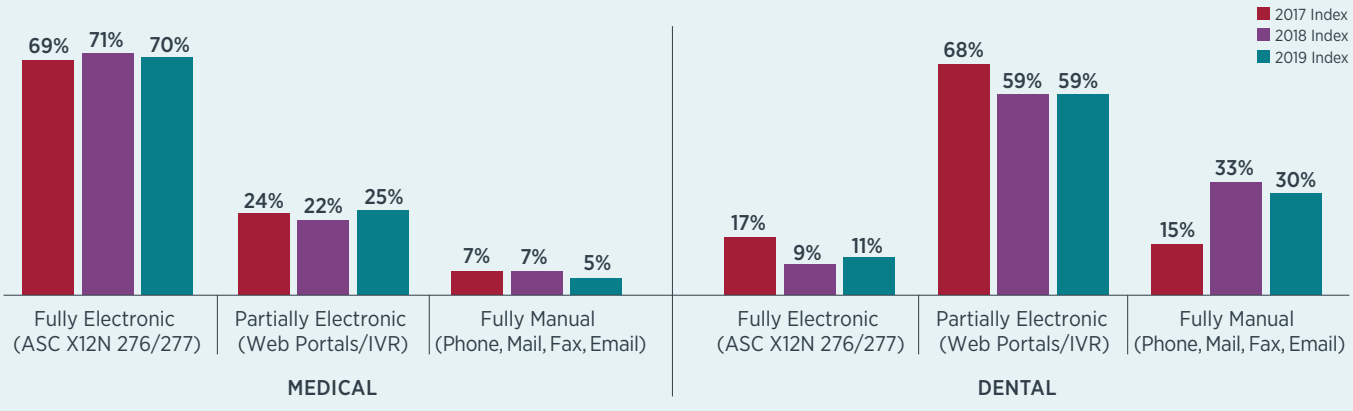
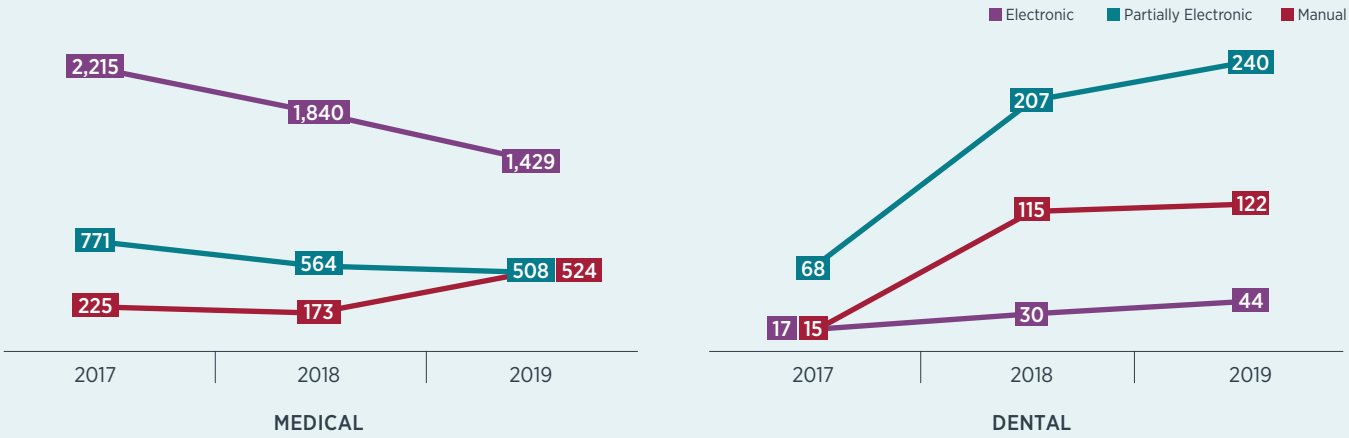


**Figure 22: Estimated National Volume of Claim Status Inquiries, by Mode, 2017-2019 CAQH Index (in millions)**




Note: Data represents plans and providers.

to analyze and act on insights from vast clinical and administrative data resources.[17] These efforts typically occur upstream of the fee-for-service claim status inquiry. The increase in manual volume may also be related to complex claims associated with value-based payment arrangements.

By comparison dental industry volume rose 15 percent, driven by significant increases in the use of fully electronic and partially electronic claim status inquiries. Manual volume also increased by six percent from the previous year. On an annual per member basis, volume remained relatively stable for both the medical and dental industries at four transactions per member for the medical industry and one transaction per member for the dental industry.

## ESTIMATED SPEND AND SAVINGS POTENTIAL

### Spend

Combined, the medical and dental industries spent over $6.2 billion in the past year on claim status inquiries. Of the total annual spending reported for administrative transactions, claim status inquiries accounted for 15 percent of medical spend and 17 percent of dental spend.

Claim status inquiry was the second most expensive transaction to conduct manually ($10.13) and electronically ($2.41) for the medical industry. For the dental industry, claim status inquiry was the most expensive transaction among both manual ($12.26) and electronic ($2.03) transactions.

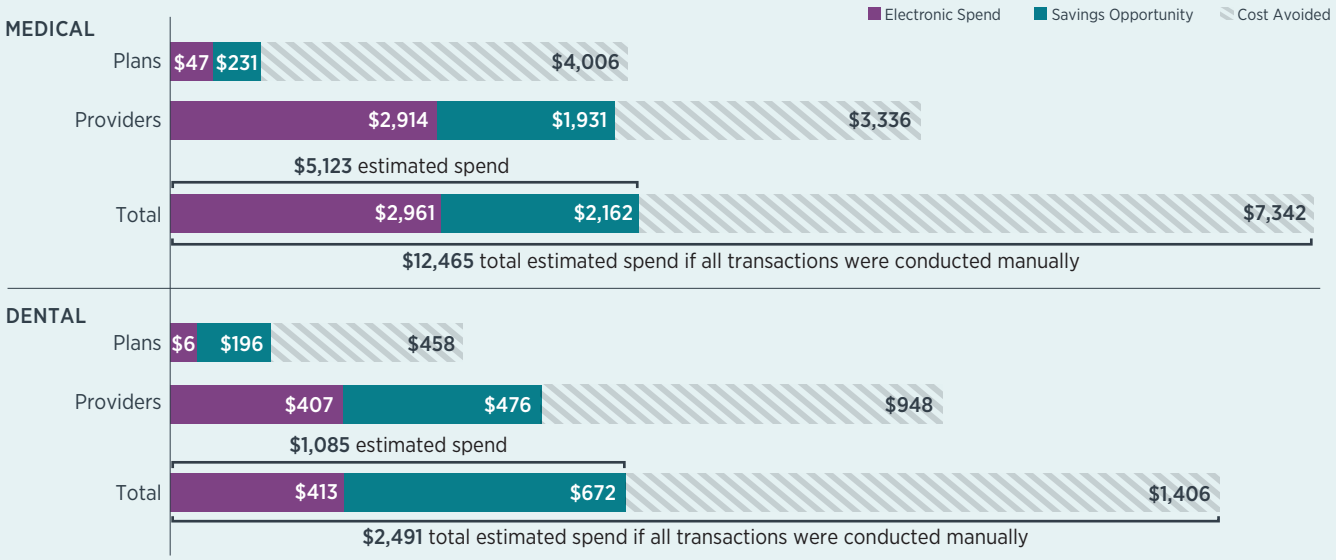
### Savings Potential

The medical industry could save over 42 percent of the existing spend on claim status inquiries, or $2.2 billion, by moving manual and partially electronic web portal inquiries to fully electronic transactions. The savings potential associated with claim status inquiry is the second highest savings opportunity for the medical industry behind the eligibility and benefit verification transaction. Most of this savings opportunity would occur for providers ($1.9 billion) who conduct more of these transactions manually. The $2.2 billion in total potential savings is on top of the $7.3 billion in annual costs that the medical industry has already avoided by transitioning most manual claim status inquiries to electronic transactions.

The dental industry could save nearly 62 percent of the existing spend on claim status inquiries by transitioning to fully electronic transactions. This $672 million savings opportunity is in addition to the $1.4 billion the dental

17 Linda Wilson, "Value-based care is complicating provider revenue cycles," *Health Data Management*, January 10, 2019, https://www.healthdatamanagement.com/news/value-based-care-is-complicating-organizations-revenue-cycles.

**Figure 23: Claim Status Inquiry: How Much is Being Spent and How Much More Can Be Saved With Full Adoption? 2019 CAQH Index (in millions)**




Note: May not be drawn to scale.

industry has already avoided spending on an annual basis primarily through the use of web portals. By transitioning from web portal transactions to fully electronic transactions, dental providers could save 43 cents per transaction, resulting in a potential annual savings of nearly $52 million.

## Time

For medical providers, manual claim status inquiries consumed 12 minutes of staff time on average, whereas the electronic transaction took only four minutes. Some providers reported that staff spent as much as 20 minutes conducting claim status inquiries manually and as much as 11 minutes when conducting electronic transactions. The average potential time savings for electronic claim status inquiries is eight minutes.

Similarly, dental providers spent 17 minutes on average to conduct a manual claim status inquiry and four minutes on an electronic inquiry. Dental providers reported that staff spent a maximum of 50 minutes to conduct a manual claim status inquiry, the highest maximum time reported for any dental transaction. The average time that could be saved by switching from manual to electronic claim status inquiries is 13 minutes per claim for the dental industry.

**Electronic Claim Status Inquiry**

**Potential Average Time Savings (per transaction):**

**Medical Industry: 8 Minutes**

**Dental Industry: 13 Minutes**

## Claim Payment

After a claim is processed, payment can be made via paper check, virtual credit card or automated through electronic funds transfer (EFT). While the healthcare industry overall has seen an increase in the number of EFTs[18], mainly due to the speed and ease associated with their use, the dental industry still relies heavily on paper checks.

Dental providers participating in the 2019 CAQH Index have cited difficulty in tracking and reconciling EFTs as reasons for not adopting these transactions, as well as the comfort of "having a check in hand." The American Dental Association (ADA), in response to a Request for Information CMS-6082-NC on Reducing Administrative Burden to Put Patients over Paperwork, indicated that, while they strongly encourage dentists to implement the HIPAA standard in order to lower administrative time, they recognize that some dentists prefer the use of paper checks.[19]

### ADOPTION

For medical plans, electronic claim payment adoption increased by seven percentage points, reaching 70 percent. Electronic adoption for claim payment showed the greatest increase from the prior report compared to the other reported transactions for the medical industry. Dental plan electronic adoption remained fairly stable with a one percentage point increase.

**Electronic Claim Payment**

**$915 Million in Potential Savings Annually for the Medical and Dental Industries Combined**


### VOLUME

The volume of claim payments for the medical and dental industries rose 18 percent and three percent respectively. This increase in volume closely matches the increase reported for both industries related to claim submission, however medical claim submission volume is higher than claim payment volume given payments are often made in bulk where one payment is associated with multiple claims. For medical plans

18 "Same Day ACH Volume Surpasses 1 Million Payments Daily," News, Nacha website, October 15, 2019, https://www.nacha.org/news/ach-network-volume-jumps-in-third-quarter.

19 "ADA proposes 5 solutions in CMS information request for reducing paperwork," ADA News Archive, ADA website, July 31, 2019, https://www.ada.org/en/publications/ada-news/2019-archive/july/ada-proposes-5-solutions-in-cms-information-request-for-reducing-paperwork.

**Figure 24. Medical and Dental Plan Adoption of Claim Payment, 2017-2019 CAQH Index**

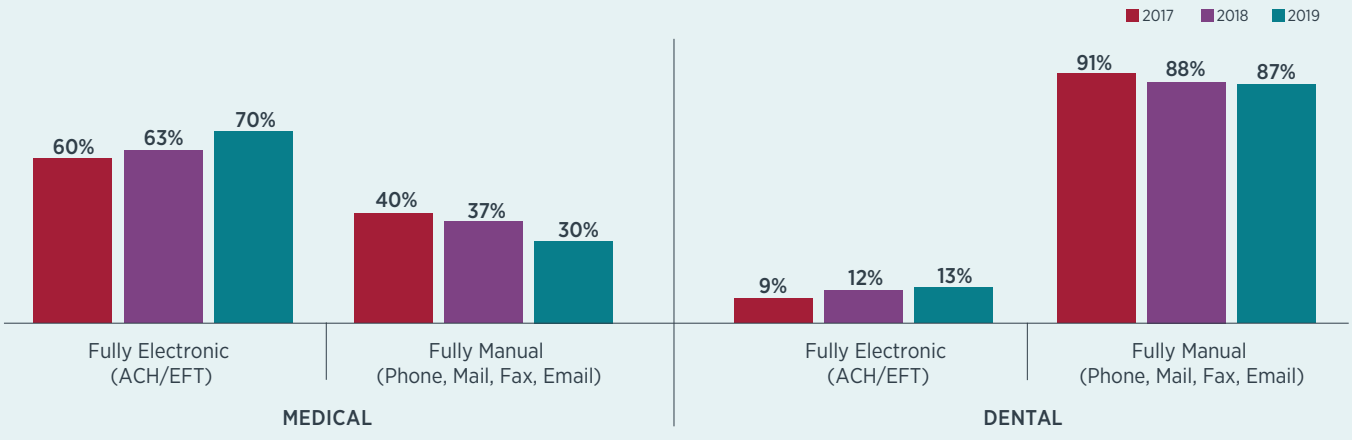
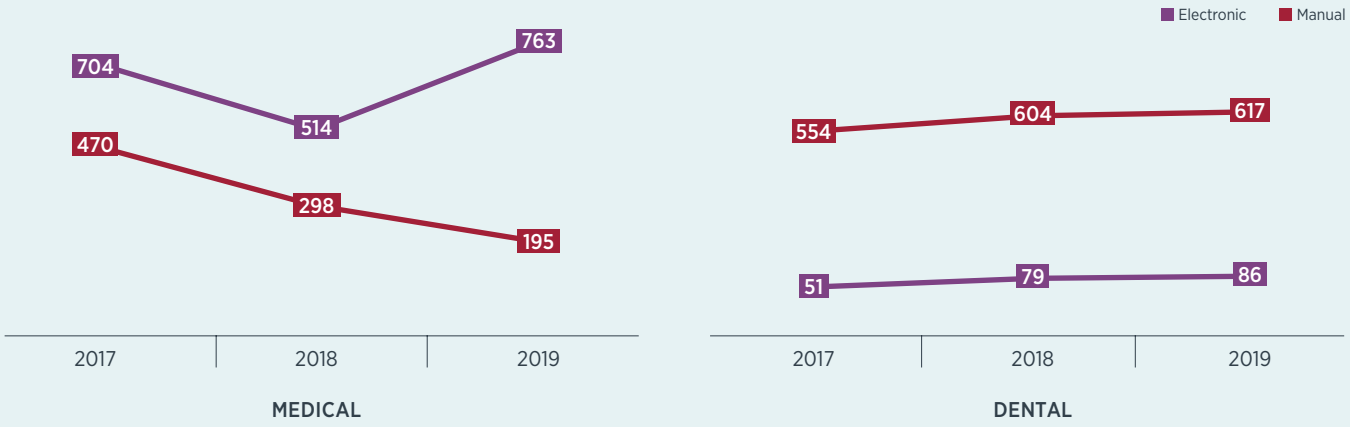


**Figure 25: Estimated National Volume of Claim Payments, by Mode, 2017-2019 CAQH Index (in millions)**




Note: Data represents plans and providers.

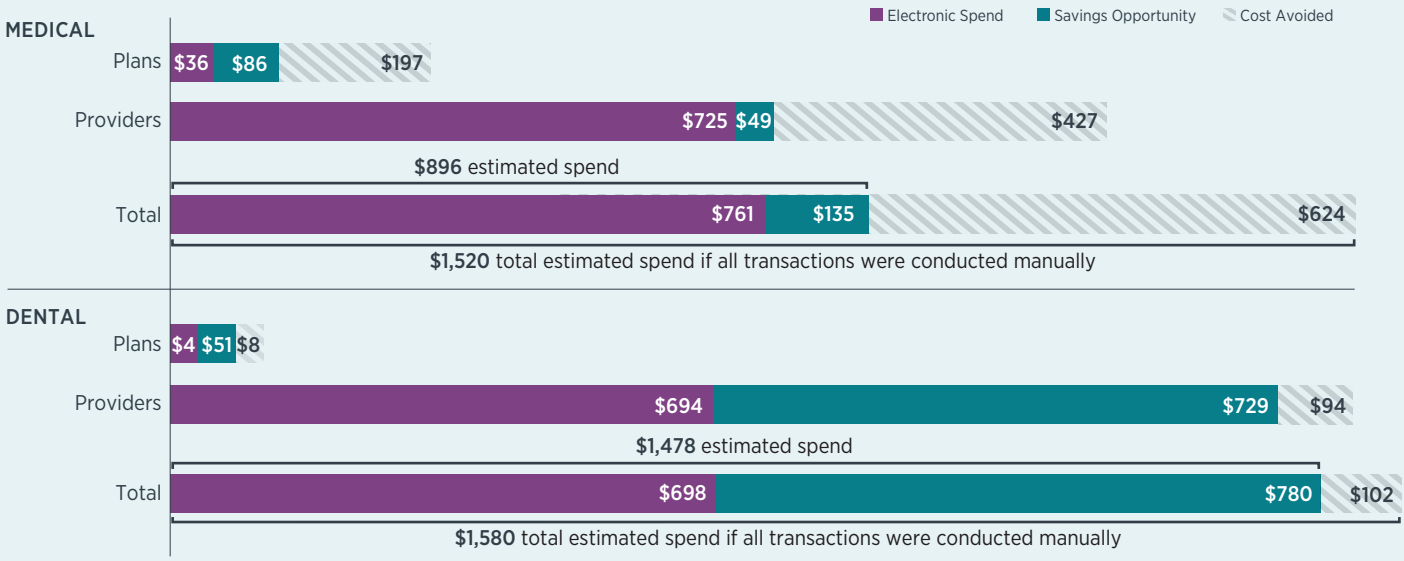
and providers, the increase in volume was driven by a significant increase in the use of electronic claim payments. Dental plans and providers experienced a nine percent increase in electronic volume and a two percent increase in manual volume. The number of transactions per member remained stable from the previous report, one transaction per member, for the medical and dental industries.

## ESTIMATED SPEND AND SAVINGS POTENTIAL

### Spend

The medical industry spent $896 million on claim payments in the past year compared to the mostly manual spend by the dental industry at nearly $1.5 billion. Spending on claim payments was the second highest category of spending for the dental industry after eligibility and benefit verification transactions.

**Figure 26: Claim Payment: How Much is Being Spent and How Much More Can Be Saved With Full Adoption? 2019 CAQH Index (in millions)**




Note: May not be drawn to scale.

While spending on claim payments accounted for only three percent of spending for the medical industry on administrative transactions, claim payments accounted for 23 percent of spending by the dental industry. Over 96 percent of spending by the dental industry is attributed to dental providers where the cost of processing a check manually was $4.31 compared to $1.97 for processing a check electronically.

### Savings Potential

By conducting claim payments electronically, the medical industry could save $135 million annually and the dental industry could save $780 million annually. The dental industry could learn from the medical industry, which has already avoided spending $624 million annually by moving to electronic claim payment.

The annual savings opportunity for the dental industry associated with electronic claim payment is nearly eight times greater than the $102 million in annual costs already avoided by a small percentage of the industry that has switched from paper checks to electronic payments.

### Time

Medical providers reported that, on average, paper checks take five minutes to process compared to three minutes to process an electronic payment. Dental providers spend, on average, eight minutes conducting a manual transaction versus four minutes electronically. Dental providers could save four minutes of processing time by switching from paper checks to electronic claim payments.

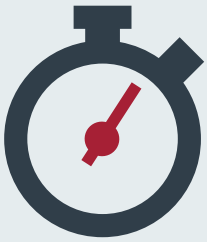
**Electronic Claim Payment**

**Potential Average Time Savings (per transaction):**

**Medical Industry:**
**2 Minutes**



**Dental Industry:**
**4 Minutes**



## Remittance Advice

A remittance advice is a communication from a plan to a provider about a claim payment. The transaction contains information about services rendered, adjustments and payment method, such as a check or electronic funds transfer (EFT). Previous CAQH Index reports have shown a continual increase in the volume of remittance advice transactions. This is due in part to duplicate posting of remittance advice information on health plan portals and through the electronic remittance advice (ERA) standard to allow providers various opportunities to access the information.

Dental providers participating in the 2019 CAQH Index have reported that the lack of sufficient information on the remittance advice has resulted in dental providers using plan portals to download and print copies of electronic explanations of benefits (EOBs). These dental providers indicated that EOBs tend to have more detailed information related to reimbursement than the remittance advice and are easier to use for reconciliation of claim payments given the Claim Adjustment Reason Codes (CARC) and Remittance Advice Remark Codes (RARC) code combinations are limited for dental providers.

### ADOPTION

ERA adoption by medical plans increased by three percentage points compared to the previous report decrease of eight percentage points. After prior authorization and attachments, this transaction has the lowest electronic adoption at 51 percent. Partially electronic adoption increased four percentage points, while manual adoption dropped seven percentage points to a near negligible level of two percent.

Dental plan ERA adoption continued to increase for the second year, rising by five percentage points to 22 percent, while manual adoption decreased by three percentage points. As opposed to the sizeable partially electronic adoption for medical plans, web portal use is infrequently used by dental plans for remittance advice.

**Electronic Remittance Advice**

**$2.7 Billion in Potential Savings Annually for the Medical and Dental Industries Combined**

**Medical Industry:**
**$1.9 B**

**Dental Industry:**
**$799 M**


**Figure 27: Medical and Dental Plan Adoption of Remittance Advice, 2017-2019 CAQH Index**

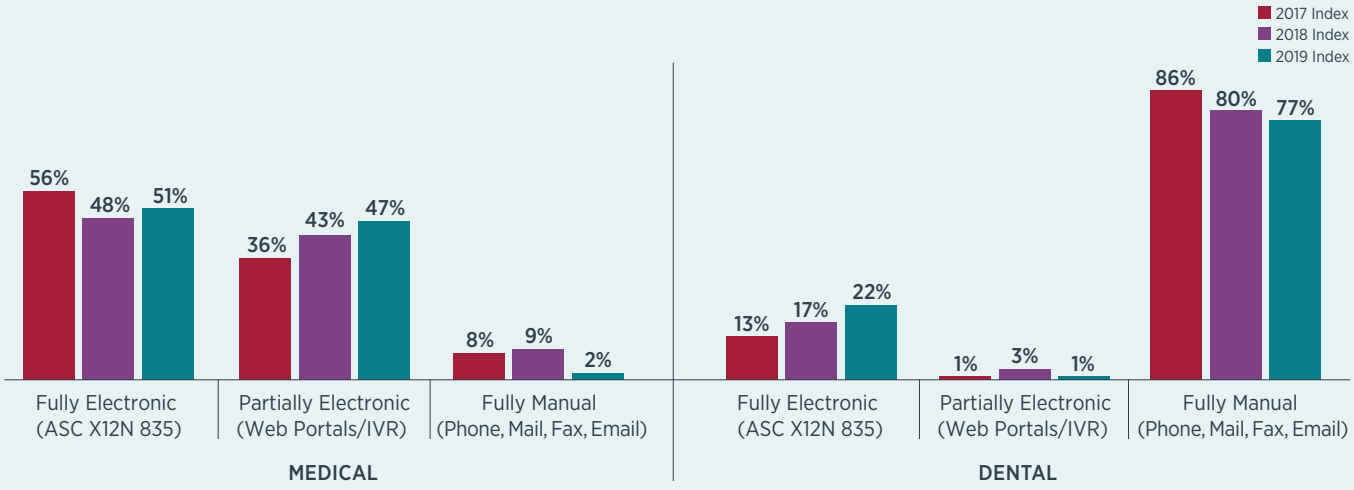
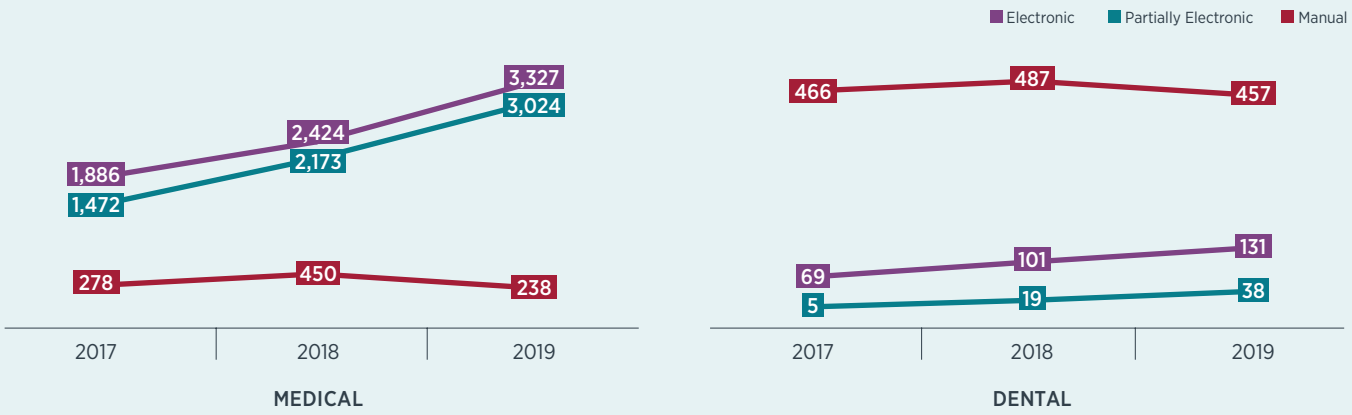


**Figure 28: Estimated National Volume of Remittance Advice Transactions, by Mode, 2017-2019 CAQH Index (in millions)**




Note: Data represents plans and providers.

## VOLUME

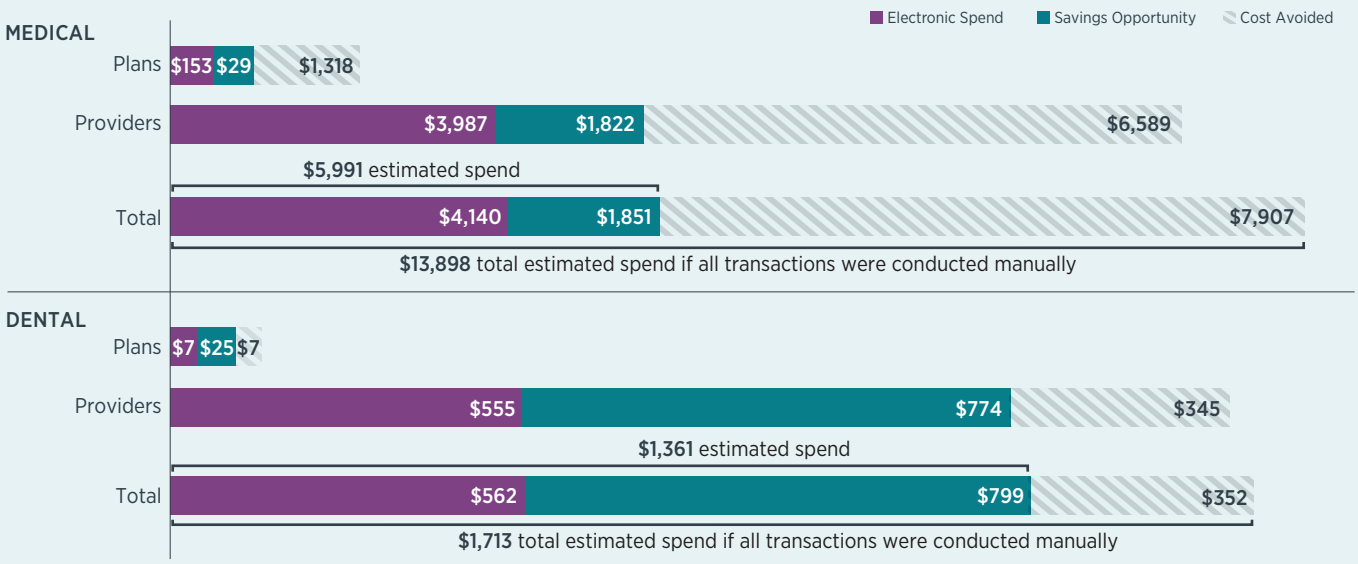
The number of remittance advice transactions increased for both the medical and dental industries. For the medical industry, overall volume increased by 31 percent driven by the continued increase in duplicate use of ERA transactions and web portals. For the dental industry, remittance advice volume increased by three percent from the previous report. For both industries, manual volume decreased. The number of transactions per member increased from eight to ten transactions for the medical industry, while the dental industry remained stable at one transaction per member.

## ESTIMATED SPEND AND SAVINGS POTENTIAL

### Spend

Nearly $6 billion was spent by the medical industry on remittance advice, while the dental industry spent almost $1.4 billion. For both industries, this corresponds

**Figure 29: Remittance Advice: How Much is Being Spent and How Much More Can Be Saved With Full Adoption? 2019 CAQH Index (in millions)**




Note: May not be drawn to scale.

to roughly 20 percent of the annual total spend on administrative transactions. Spending on remittance advice represented the second highest administrative transaction expense for the medical industry and the third highest expense for the dental industry.

### Savings Potential

For the second year in a row, the savings opportunity for the medical industry declined from $2.4 billion in the prior report to $1.9 billion. The decline reported in the previous report was a result of a reduction in the manual cost of a transaction, while the decline this year was a result of lower manual volume. Despite this continued decline, remittance advice remains the third highest cost savings opportunity, with 76 percent of the savings opportunity associated with eliminating the mostly duplicative use of web portals.

The dental industry could save $799 million annually by converting manual remittance advice transactions to ERA transactions. This potential for savings is the second highest cost savings opportunity across all dental transactions reported.

### Time

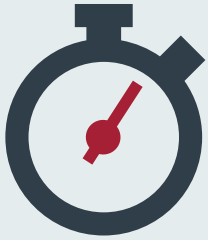
On average, medical providers reported that an ERA required two minutes of staff time compared to seven minutes when conducting the transaction manually. Dental providers reported that they spent an average of four minutes on an ERA compared to 11 minutes on a manual remittance advice. Conducting the transaction via a web portal required an average of four minutes to complete for both medical and dental providers.

**Electronic Remittance Advice**

**Potential Average Time Savings (per transaction):**

**Medical Industry:**
**5 Minutes**

**Dental Industry:**
**7 Minutes**



# Industry Call to Action

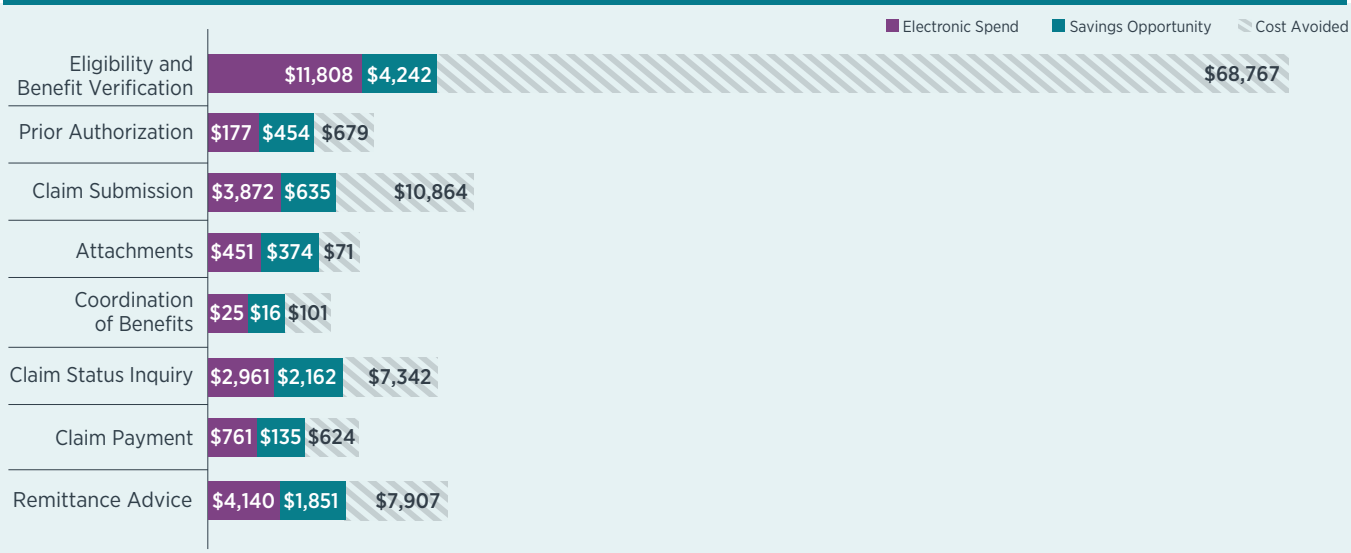
As the industry evolves and the volume and complexity of administrative transactions rise, the need to streamline, automate and adapt business processes to changing business needs will continue to be a challenge. Despite these challenges, the industry should be encouraged by the annual costs avoided through automation, as shown in Figures 30 and 31. The majority of industry savings corresponds to transactions with higher electronic adoption levels, as shown for eligibility and benefit verification and claim submission. Continued efforts to automate administrative transactions can continue to deliver savings; however, standards, operating rules and technology must keep pace with the needs of the industry.

Findings from the 2019 CAQH Index show that adoption of electronic transactions continues to improve alongside the overall increase in transaction volume. However, use of partially electronic web portals increased for some transactions and may be viewed as a step towards adoption of fully electronic transactions or as a way to adapt to changing business needs. New analyses indicate that savings opportunities exist not only when switching from manual to fully electronic transactions, but also when moving from partially electronic web portals to fully electronic transactions. To achieve these savings, the reasons for web portal use need to be more fully understood so that standards and operating rules can adapt as needed to support the industry.

To support adoption of fully electronic transactions that can accommodate evolving market needs, limit cost and reduce burden, CAQH proposes the following actions for the industry to help maintain and improve upon the achievements accomplished to date:

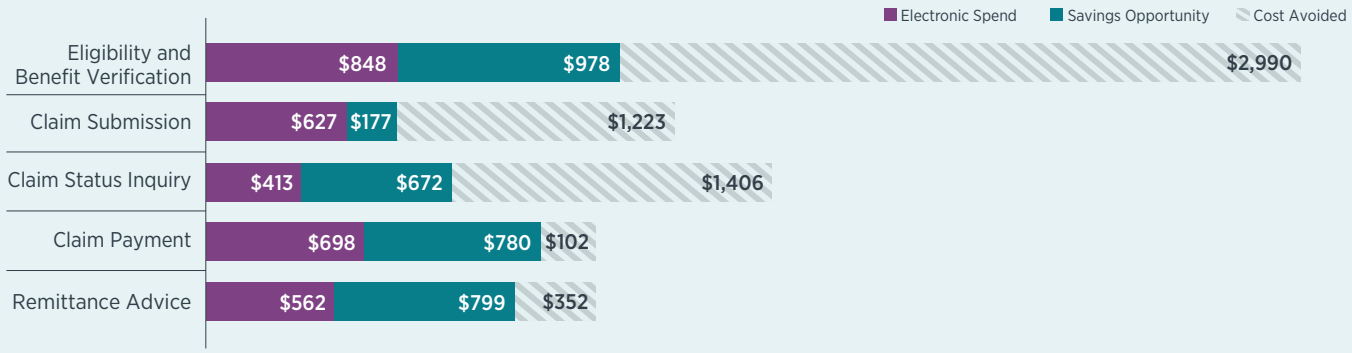
**Focus Efforts to Reduce Provider Burden:** Given that the majority of savings opportunities are attributed to medical and dental providers, the greatest opportunity to reduce administrative costs is to focus on transactions like eligibility and benefit verification, claim status, remittance advice and prior authorization. For example, new findings from the 2019 CAQH Index suggest that provider burden could be reduced by switching from partially electronic web portals to fully electronic transactions. Providers could save, on average, nine minutes for a single patient encounter through the administrative workflow if all transactions were conducted using the fully electronic method instead of through web portals.

**Figure 30: Estimated Medical Spend and Savings by Transaction, 2019 CAQH Index (in millions)**




Note: May not be drawn to scale.

**Figure 31: Estimated Dental Spend and Savings by Transaction, 2019 CAQH Index (in millions)**




Note: May not be drawn to scale.

**Accelerate Standards and Operating Rule Development to Support the Harmonization of Administrative and Clinical Data Exchange:** To maintain and foster ongoing adoption of fully electronic transactions, standards and operating rules must support changing business needs. In particular, standards and operating rules must adapt to the need for alignment between administrative and clinical data. The National Committee on Vital and Health Statistics (NCVHS), in a letter to the U.S. Department of Health and Human Services (HHS), provided recommendations to promote interoperability and reduce provider and regulatory burden.[20] One of these recommendations focused on the need to "modernize" the rulemaking process given "the current processes do not accommodate the pace at which the healthcare industry needs to address changes in technology, payment models and patient care delivery strategies."

The CAQH CORE Board has made it a priority to increase the speed in which operating rules are developed and approved through the use of refined methodologies. For example, CAQH CORE convenes advisory groups composed of a diverse array of industry experts tasked with prioritizing operating rule opportunities to enable more focused requirement development by CAQH CORE participating organizations. Additionally, operating rule development and testing is being accelerated through the use of pilots to measure impact and value. Finally, in 2020 CAQH CORE is reorganizing its operating rule structure to align with the business processes the rules support, rather than a phased approach. This structural change will enable smaller, more regular operating rule updates as envisioned by NCVHS. More frequent and timely adoption of recommended updates to operating rules and standards is also needed by HHS to maintain and improve the use of electronic transactions and support the intersection of administrative and clinical data.

In addition to refining processes, the CAQH CORE Board also prioritized enabling greater administrative and clinical interoperability through operating rules. The current X12 and Da Vinci Project cooperative effort to map Da Vinci FHIR resources to the X12 5010X217 278 Prior Authorization Request and Response is another example of the industry working together to support administrative and clinical standards interoperability. In 2020, CAQH CORE participating organizations will consider updates to the CAQH CORE Connectivity requirements to move the industry towards a common set of Safe Harbor connectivity methods to support these existing and emerging standards and protocols. Together these efforts will allow for flexibility to adapt to business needs, while still providing the structure needed to support end to end electronic processing.

**Need for Vendor Adoption of All Standards and Operating Rules:** Modern HIPAA-compliant solutions are needed to support adoption of all electronic transactions, particularly among medical and dental providers. For example, medical providers have expressed frustration with the lack of technology solutions to support prior authorization. There is also an opportunity for vendors to

20 "Recommendation-Letter-Predictability-Roadmap.pdf," uploads, NCVHS website, accessed December 26, 2019, https://ncvhs.hhs.gov/wp-content/uploads/2019/02/Recommendation-Letter-Predictability-Roadmap.pdf.

engage with the dental industry and to develop dental specific solutions. Dental providers have suggested that they would be willing to conduct transactions electronically if a solution existed and/or if available solutions accounted for dental requirements. The lack of available solutions results in many dental providers conducting transactions manually.

**Expand Research Related to the Administrative Workflow:** The desire to reduce administrative costs and burden requires not only support from all stakeholders, but also additional research on the challenges associated with adoption. This year, due to refined data collection and expanded participation by medical and dental providers, the CAQH Index was able to shed more light on the utilization and cost associated with partially electronic web portals. While conducting transactions via portals is less time consuming and less costly than conducting transactions manually, there are savings associated with converting portal-based transactions to fully electronic transactions. This insight provides an example of how more detailed information on savings opportunities in the industry can be used to understand and reduce administrative burden.

As value-based payment arrangements continue to grow, understanding the role of administrative simplification in the clinical workflow could help to align administrative and clinical activities among providers, payers and consumers. CAQH CORE is currently evaluating administrative challenges associated with value-based payment, taking into account the information exchanged by providers and health plans and the opportunities for automating how this information is exchanged. Continued research is needed in this area by a range of stakeholders.

The actions outlined here provide guidance to the industry as it continues to automate the administrative workflow. Through stakeholder support and collaboration, strategies to encourage and foster adoption of electronic transactions could be harmonized to drive more timely and effective progress.

## How You Can Help Improve the CAQH Index

The CAQH Index collects data and tracks 13 transactions in total. In the 2019 CAQH Index, data submissions supported calculation of benchmarks for eight of the 13 transactions. All medical and dental plans, providers and vendors are encouraged to contribute data to the CAQH Index.

To participate in the 2020 CAQH Index and for more information, please email explorations@caqh.org.

# Methodology

## Introduction

The CAQH Index is the industry source for tracking plan and provider adoption of fully electronic administrative transactions. The 2019 CAQH Index estimates the industry spend, cost avoided through automation and remaining cost savings opportunity.

The 2019 CAQH Index is the seventh annual report which collects data from medical and dental plans covering nearly half of the insured U.S. population in the year studied based on enrollment reported in AIS's Directory of Health Plans[21] and NADP's Dental Health Plan Profiles.[22] This is the fifth report to include dental health plan data. The CAQH Index also collects data from medical and dental providers across the U.S.

## Recruitment

Plan and provider data contributors were encouraged to participate in the study using several methods, including direct outreach (e.g., email/telephone), through speaking engagements at industry conferences, in webinars, advertisements, postings on the CAQH website and social media. CAQH managed recruitment of medical and dental plan data contributors and partnered with NORC at the University of Chicago (NORC), which managed medical and dental provider recruitment, data collection and analysis.

CAQH partnered with the American Dental Association (ADA), National Dental Electronic Data Interchange Council (NDEDIC), Medical Group Management Association (MGMA), Healthcare Financial Management Association (HFMA), American Hospital Association (AHA) and American Medical Association (AMA) to encourage medical and dental providers to participate. Providers also included those who participated in the CAQH Index previously and additional contacts from CAQH. Honorariums were offered to increase response and encourage participants to complete the survey. All medical and dental provider participants were also offered a benchmark report comparing their data to the aggregate data.

CAQH worked with CAQH member organizations, Advisory Council members and industry stakeholder groups to recruit medical and dental plans. Many of the large national and regional plans have continued to participate over the years. Some smaller plans also contribute data; however, these plans have not participated in every year. Medical and dental plan data contribution is voluntary and there are no financial incentives provided for participation. All medical and dental plan participants were offered a benchmark report comparing their data to the aggregate data.

## Data Collection

Data submitted to the CAQH Index is through a voluntary, survey based process. Surveys were fielded to medical plans, dental plans, medical providers and dental providers from June to September 2019. CAQH managed the medical and dental plan survey data collection process. Medical and dental plan survey data is representative of the 2018 calendar year, January 1 to December 31. Medical and dental provider survey data is representative of the 2018 calendar year, January 1 to December 31, with the option to include data from other fiscal years. NORC managed the medical and dental provider survey data collection process.

Enhancements made to the 2019 CAQH Index data collection tool included clarifying and simplifying transaction and mode definitions as well as asking for information on time and cost associated with conducting partially electronic transactions. These changes, along with a larger provider sample, allowed for reporting at a finer level of granularity.

Medical and dental provider participant surveys requested data on nine transactions and medical and dental plans were asked for data on thirteen transactions. As shown in Table 6, data collected

21 AIS Health Data, a Division of Managed Markets Insight and Technology, LLC, AIS's Directory of Health plans: 2018, (2019).

22 National Association of Dental Health Plans, Dental Benefits Report, 2018.

**Table 5: Overview of Electronic Administrative Transactions Studied in the 2019 CAQH Index**

| Transaction | HIPAA Standard | Description |
|---|---|---|
| Eligibility and Benefit Verification† | ASC X12N 270/271 | An inquiry from a provider to a health plan, or from one health plan to another, to obtain eligibility, coverage, or benefits associated with the health or benefit plan, and a response from the health plan to a provider. Does not include referrals. |
| Prior Authorization/ Pre-Determination | ASC X12N 278 | A request from a provider to a health plan to obtain authorization for health care services; or a response from a health plan for an authorization. Does not include referrals. |
| Provider Referral | ASC X12N 278 | A request from a provider to a health plan to obtain approval to refer an individual to another provider; or a response from a health plan regarding a referral request. |
| Claim Submission | ASC X12N 837 | A request to obtain payment or transmission of encounter information for the purpose of reporting health care. |
| Coordination of Benefits Claims | ASC X12N 837 | Claims that are sent to secondary payers with explanation of payment information from the primary payer to determine remaining payment responsibilities. |
| Attachments | Includes ASC X12N 275, HL7 CDA | Additional information submitted with claims for payment, claim appeals or prior authorization, such as medical records to support the claim or medical records to explain the need for a procedure or service. |
| Attachments (Under VBP) | | Medical information or quality measure documents that are submitted under value based arrangements. |
| Claim Status Inquiry† | ASC X12N 276/277 | An inquiry from a provider to a health plan to determine the status of a health care claim or a response from the health plan. |
| Claim Payment† | NACHA Corporate Credit or Deposit Entry with Addenda Record (CCD+) | An electronic funds transfer (EFT) from a health plan's bank to a provider's bank; including payment and data specific to the payment. |
| Enrollment / Disenrollment | ASC X12N 834 | Transaction between an employer group, a broker, Marketplace/Exchange/ HIX, or a Medicaid agency to a health plan for enrollment/disenrollment into a health plan product. Used for initial enrollment, changes to enrollment or termination of enrollment. |
| Premium Payment | ASC X12N 820 | Transaction between an employer group, broker, or Marketplace/Exchange/ HIX and a health plan that provides remittance advice information about payments of the health plan product premium. |
| Remittance Advice† | ASC X12N 835 | The transmission of explanation of benefits or remittance advice from a health plan to a provider. |
| Acknowledgements | ASC X12N 277CA and 999 | A health plan's response to a provider or provider's clearinghouse that they received information from the provider or clearinghouse; or confirmation received by a provider that the information shared with a health plan has been rejected or accepted. |

† Both HIPAA standards and operating rules are federally mandated.

* ASC X12N 275 and HL7 CDA are both industry recognized standards for electronic attachments.

from medical plans represented 154 million lives, or approximately 47 percent of covered lives in the U.S. Data submissions from medical plans represented nearly 1.7 billion claims and over 7.9 billion total transactions. All medical and dental industry data is based on medical/surgical and related healthcare claims and inquiries. The CAQH Index does not yet include pharmacy transactions. Data collected from dental plans represented 111 million lives, or approximately 44 percent of covered dental lives in the U.S. Dental data submissions represented over 726 million transactions.

## Data Analyses

All analyses were conducted in the aggregate to ensure individual organizations are not identifiable. Benchmarks were calculated and reported for each transaction for which three or more plans submitted data. The following benchmarks are reported for each transaction where possible:

- **Adoption Rate –** The degree to which plans complete transactions using fully electronic, partially electronic, or manual methods, as estimated and reported by the participating plans.
- **Estimated Volume –** The volume of fully electronic, partially electronic and manual transactions reported by plans weighted to a national level and the distribution of volume by mode reported by medical and dental providers applied to the national estimated plan transaction volume.
- **Cost Per Transaction –** The labor costs (e.g., salaries, wages, personnel benefits and related overhead costs) associated with fully electronic, partially electronic and manual transactions, as estimated, and reported by the participating plans and providers. Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction or follow-up. Costs do not include system costs (e.g. maintaining, building or buying software and other equipment).

**Table 6: Basic Characteristics of CAQH Index Data Contributors, 2014-2019 CAQH Index**

| | 2014 Index | 2015 Index | 2016 Index | 2017 Index | 2018 Index | 2019 Index |
|---|---|---|---|---|---|---|
| **MEDICAL** | | | | | | |
| Medical Plan Members (total in millions) | 112 | 118 | 140 | 155 | 160 | 154 |
| Proportion of Total Enrollment (%) | 42 | 45 | 46 | 51 | 49 | 47 |
| Number of Claims Received (total in billions) | 1 | 1 | 2 | 2 | 2 | 2 |
| Number of Transactions (total in billions) | 4 | 4 | 5 | 6 | 8 | 8 |
| **DENTAL** | | | | | | |
| Dental Plan Members (total in millions) | N/A | 93 | 112 | 117 | 106 | 111 |
| Proportion of Total Enrollment (%) | N/A | 44 | 46 | 48 | 44 | 44 |
| Number of Claims Received (total in millions) | N/A | 158 | 173 | 182 | 177 | 185 |
| Number of Transactions (total in millions) | N/A | 439 | 564 | 650 | 731 | 726 |

N/A = Not Applicable

**Table 7: Annual Volume of Administrative Transactions Reported by Medical and Dental Health Plans, 2018-2019 CAQH Index**

| Transaction | Number of Transactions (in millions) | | | | Number of Transactions (per Member) | | | |
|---|---|---|---|---|---|---|---|---|
| | 2018 INDEX | | 2019 INDEX | | 2018 INDEX | | 2019 INDEX | |
| | MEDICAL | DENTAL | MEDICAL | DENTAL | MEDICAL | DENTAL | MEDICAL | DENTAL |
| Eligibility and Benefit Verification | 4,103 | 193 | 4,155 | 186 | 26 | 2 | 30 | 2 |
| Prior Authorization/ Pre-Determination | 42 | N/R | 24 | NR | <0.1 | N/R | 0.3 | N/R |
| Claim Submission | 1,551 | 177 | 1,690 | 185 | 10 | 2 | 11 | 2 |
| Attachments | N/R | N/R | 45 | 5 | N/R | N/R | 1 | N/R |
| Coordination of Benefits | N/R | N/R | 28 | N/R | N/R | N/R | <1 | N/R |
| Claim Status Inquiry | 625 | 77 | 359 | 80 | 4 | 1 | 4 | 1 |
| Claim Payment | 193 | 149 | 198 | 153 | 1 | 1 | 1 | 1 |
| Remittance Advice | 1,203 | 132 | 1,197 | 117 | 8 | 1 | 10 | 1 |
| **Total Transactions** | **7,717** | **728** | **7,696** | **726** | **49** | **7** | **57** | **7** |

N/R = Not Reported

- **Estimated Spend, Cost Avoided and Potential Savings –** Spend per transaction is estimated at a national level using the enrollment numbers, transaction volumes and cost per transaction by mode estimates from the participating plans and the volume distributions and cost estimates from medical and dental providers. The detailed weighting methodology is described below to scale to national estimates.
- **Provider Potential Time Savings –** The time is estimated using the average time required to conduct fully electronic, partially electronic and manual transactions as reported by medical and dental providers.

For the 2019 CAQH Index, eight medical and five dental transactions are benchmarked and reported for adoption, cost per transaction, estimated national potential cost savings and spending and provider potential time savings, as shown in Table 8.

## ADOPTION RATE

Adoption rates were calculated using data submitted by plans. Transaction adoption rates reported by medical and dental plans were classified into one of three categories, referred to as a "mode" in this report:

- **Fully Electronic –** Automated transactions conducted using the adopted HIPAA standard.
- **Partially Electronic –** Web portals and interactive voice response (IVR) systems.
- **Fully Manual –** Transactions requiring end-to-end human interaction, such as telephone, mail, fax and email.

For each transaction, the annual adoption rates were computed by mode as a proportion of the total volume reported by plans. The annual percentage point change is presented for transactions with multiple years of available data and was calculated as the arithmetic difference between percentages reported in the current (e.g., 2019 CAQH Index) and the prior year report (e.g., the 2018 CAQH Index).

## Table 8: Overview of 2019 CAQH Index Data and Benchmarks, Per Transaction

| Transaction | Adoption | | Cost per Transaction | | Estimated National Potential Cost Savings and Spending | | Time per Transaction for Providers | | First Index Report Year Studied | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MEDICAL | DENTAL | MEDICAL | DENTAL | MEDICAL | DENTAL | MEDICAL | DENTAL | MEDICAL | DENTAL |
| Eligibility and Benefit Verification | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | 2013 | 2015 |
| Prior Authorization/ Pre-Determination | ♦ | No Benchmark Reported (Insufficient Data) | ♦ | | ♦ | | ♦ | | 2013 | |
| Provider Referral | No Benchmark Reported (Insufficient Data) | No Benchmark Reported (Insufficient Data) | | | | | | | 2015 | 2017 |
| Claim Submission | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | 2013 | 2015 |
| Attachments* | ♦ | No Benchmark Reported (Insufficient Data) | ♦ | | ♦ | | ♦ | | 2014 | 2016 |
| Attachments (Under VBP) | No Benchmark Reported (Insufficient Data) | No Benchmark Reported (Insufficient Data) | | | | | | | 2019 | 2019 |
| Coordination of Benefits | ♦ | No Benchmark Reported (Insufficient Data) | ♦ | | ♦ | | | | 2015 | |
| Claim Status Inquiry | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | 2013 | 2015 |
| Claim Payment | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | 2013 | 2015 |
| Enrollment / Disenrollment | No Benchmark Reported (Insufficient Data) | No Benchmark Reported (Insufficient Data) | | | | | | | 2015 | |
| Premium Payment | No Benchmark Reported (Insufficient Data) | No Benchmark Reported (Insufficient Data) | | | | | | | 2015 | |
| Remittance Advice | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | 2013 | 2016 |
| Acknowledgements | No Benchmark Reported (Insufficient Data) | No Benchmark Reported (Insufficient Data) | | | | | | | 2017 | |

* In 2019, attachments includes additional information submitted with claim payments, claim appeals or prior authorizations, such as medical records to support the claim or medical records to explain the need for a procedure or service.

## ESTIMATED VOLUME

### Plan Estimated Volume

For each transaction, the total volume of transactions occurring in the U.S. medical and dental industry is estimated based on the proportion of covered lives represented by contributing medical and dental plans. The total volume of covered lives is captured from the AIS's Directory of Health Plans[23] for medical plans and NADP's Dental Health Plan Profiles for dental plans.[24] The proportion represented by transaction may vary depending on the data contributor's ability to report on each transaction. The extrapolated national volumes of each transaction are calculated by mode as follows for both medical plans and dental plans:

$$\text{Extrapolated Plan Volume (for each modality)} = \frac{\text{Volume Reported by Plans}}{\text{Percent of Covered Lives Represented by CAQH Data Contributors}}$$

### Provider Estimated Volume

For medical and dental providers, given the increase in the number of respondents, a weighting methodology was applied to the distribution of volume by mode based on the size and type of provider using the American Medical Association (AMA) distributions[25] of physicians by practice size and type of location and the American Dental Association (ADA) distributions[26] of dental practice type. Medical providers were split into four groups: less than five physicians, five to ten physicians, 11+ physicians and hospitals, and dental providers were split into three groups: non-DSO affiliated group practice, non-DSO affiliated solo practice and DSO affiliated group or solo practice. The AMA and ADA distributions were used to weight the volume distributions reported by medical and dental providers. These weighted distributions by mode were applied to national plan estimated volumes to calculate national provider volumes by mode.

$$\text{Extrapolated Provider Volume (for each modality)} = \text{Total Plan Estimated Volume for a Given Transaction} * \text{Modality Proportion}$$

The industry estimated volume for each transaction is the sum of plan estimated volume and provider estimated volume for each mode.

## COST PER TRANSACTION

Cost per transaction was computed for each transaction by mode using weighted averages based on volume of enrollment for plans and volume of transactions for providers. Transaction costs are reported for fully electronic, partially electronic and manual transactions for medical plans, dental plans, medical providers and dental providers when available depending on sample size.

For medical plans and dental plans, the cost per transaction by mode is a weighted average based on the data submitted by contributors reporting a valid result using the proportion of their enrollment. The calculation requires both the reporting of a valid transaction volume and transaction cost by a data contributor to be included in the weighted average cost.

For medical and dental providers, weighted average costs per transaction by mode were calculated by NORC based on transaction volume and average staff cost by transaction and mode. Similarly, the time per transaction estimates were computed using the average time for each transaction and average staff salaries with weighted averages based on the volume of transactions for providers by transaction and mode.

The NORC methodology follows a four-step process.

1. First, a loaded salary per minute by transaction mode is created by dividing the salary by the number of minutes in a work year then multiplying

23 AIS Health Data, a Division of Managed Markets Insight and Technology, LLC, AIS's Directory of Health plans: 2018, (2019).

24 National Association of Dental Health Plans, Dental Benefits Report, 2018.

25 Carol K. Kane, "Updated Data on Physician Practice Arrangements: For the First Time, Fewer Physicians are Owners Than Employees," American Medical Association, accessed January 9, 2020, https://www.ama-assn.org/system/files/2019-07/prp-fewer-owners-benchmark-survey-2018.pdf.

26 Dentist Profile Snapshot by State: 2016, accessed January 9, 2020, https://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIData_Profile_2016.xlsx?la=en.

by a specified loading factor to account for benefit and overhead costs.

2. Second, the loaded cost per transaction mode by respondent created in step one is multiplied by the number of minutes per transaction by mode.

3. Third, individual weights were created to apply to the loaded costs per transaction and mode. The weights were calculated within the four practice size categories (three practice size categories for dental estimates) as the proportion of transactions a provider had within that transaction and mode compared to the total number of transactions from reporting providers used in the calculations.

4. The estimates by respondent were combined within the four practice size categories to create four overall estimated costs per transaction and mode (and within the three practice categories for the dental estimates). The practice size estimates were then multiplied by the adjusted proportions for the medical and dental industry to create weighted group cost estimates. Finally, the weighted group cost estimates were summed to create the overall weighted cost per transaction for each transaction and mode.

**Table 9: Estimated Medical and Dental Spend and Savings Opportunity, 2019 CAQH Index (in millions)**

| | Total Manual Spend* | Estimated Spend | Savings Opportunity | Electronic Cost** | Cost Avoided |
|---|---|---|---|---|---|
| MEDICAL | | | | | |
| Eligibility and Benefit Verification | $84,817 | $16,050 | $4,242 | $11,808 | $68,767 |
| Prior Authorization | $1,310 | $631 | $454 | $177 | $679 |
| Claim Submission | $15,371 | $4,507 | $635 | $3,872 | $10,864 |
| Attachments | $896 | $825 | $374 | $451 | $71 |
| Coordination of Benefits | $142 | $41 | $16 | $25 | $101 |
| Claim Status Inquiry | $12,465 | $5,123 | $2,162 | $2,961 | $7,342 |
| Claim Payment | $1,520 | $896 | $135 | $761 | $624 |
| Claim Remittance | $13,898 | $5,991 | $1,851 | $4,140 | $7,907 |
| **Total** | **$130,419** | **$34,064** | **$9,869** | **$24,195** | **$96,355** |
| DENTAL | | | | | |
| Eligibility and Benefit Verification | $4,816 | $1,826 | $978 | $848 | $2,990 |
| Claim Submission | $2,027 | $804 | $177 | $627 | $1,223 |
| Claim Status Inquiry | $2,491 | $1,085 | $672 | $413 | $1,406 |
| Claim Payment | $1,580 | $1,478 | $780 | $698 | $102 |
| Claim Remittance | $1,713 | $1,361 | $799 | $562 | $352 |
| **Total** | **$12,627** | **$6,554** | **$3,406** | **$3,148** | **$6,073** |
| MEDICAL AND DENTAL | | | | | |
| **Total** | **$143,046** | **$40,618** | **$13,275** | **$27,343** | **$102,428** |

*Total manual spend if all transactions were conducted manually.

** Cost if all transactions were conducted electronically.

Note: Costs include the labor time required to conduct the transaction, not time and cost associated with gathering information for the transaction and follow-up. Does not include system costs.

## ESTIMATED SPEND, COST AVOIDED AND POTENTIAL SAVINGS

### Estimated Spend

To estimate the spend for each transaction, costs are estimated by multiplying the estimated national volume of each modality by its respective cost per transaction for medical plans and providers for the medical industry and dental plans and providers for the dental industry. As shown in Table 9, the total spend per transaction is equal to the sum of spend for each modality per transaction for the plan and provider sides of the transaction.

### Estimated Cost Avoided

The estimated cost avoided by transaction is the arithmetic difference between the spend if all transactions were conducted manually (Total Manual Spend) and the Total Estimated Spend by transaction. The Total Manual

**Table 10: Average, Minimum, and Maximum Time Spent by Providers Conducting Manual, Partial and Electronic Transactions, Medical, 2019 CAQH Index**

| Transaction | Method | Average Time Providers Spend per Transaction (minutes) | Min Time Providers Spend per Transaction (minutes) | Max Time Providers Spend per Transaction (minutes) | Potential Average Time Saving (minutes) |
|---|---|---|---|---|---|
| Eligibility and Benefit Verification | Manual | 10 | 3 | 30 | 8 |
| | Partial | 5 | 1 | 15 | 3 |
| | Electronic | 2 | <1 | 10 | |
| Prior Authorization | Manual | 21 | 3 | 45 | 17 |
| | Partial | 8 | 1 | 20 | 4 |
| | Electronic | 4 | <1 | 18 | |
| Claim Submission | Manual | 6 | 1 | 25 | 4 |
| | Electronic | 2 | <1 | 6 | |
| Attachments | Manual | 11 | 1 | 30 | 6 |
| | Electronic | 5 | 1 | 10 | |
| Claim Status Inquiry | Manual | 12 | 1 | 20 | 8 |
| | Partial | 4 | 1 | 10 | 0 |
| | Electronic | 4 | <1 | 11 | |
| Claim Payment | Manual | 5 | <1 | 11 | 2 |
| | Electronic | 3 | <1 | 10 | |
| Remittance Advice | Manual | 7 | <1 | 19 | 5 |
| | Partial | 4 | <1 | 10 | 2 |
| | Electronic | 2 | <1 | 10 | |
| **Total Potential Time Savings (Manual)** | | | | | **50** |
| **Total Potential Time Savings (Partial)** | | | | | **9** |

Note: All participants were asked to report time by the three modes of completion (manual, partial electronic, electronic). For some transactions, partial time was not reported.

Spend per transaction is calculated by multiplying the estimated national volume of all modalities by the manual cost per transaction for medical plans and providers for the medical industry and dental plans and providers for the dental industry.

### Estimated Savings Opportunity

To calculate potential savings associated with switching from manual and partially electronic transactions to fully electronic transactions, potential savings are calculated by multiplying the estimated national volume of manual transactions by the cost per transaction difference between the fully electronic and manual transactions, by transaction. To estimate the potential savings associated with switching from partially electronic transactions to fully electronic transactions, potential savings are calculated by multiplying the estimated national volume of partially electronic transactions by the cost per transaction difference between the fully electronic and partially electronic transactions, by transaction.

When calculating spending and savings estimates, exact numbers were used. Rounded numbers are reported in the tables.

### PROVIDER POTENTIAL TIME SAVINGS

The potential time savings per transaction was estimated using the average time required by medical and dental providers to conduct fully electronic,

**Table 11: Average, Minimum, and Maximum Time Spent by Providers Conducting Manual, Partial and Electronic Transactions, Dental, 2019 CAQH Index**

| Transaction | Method | Average Time Providers Spend per Transaction (minutes) | Min Time Providers Spend per Transaction (minutes) | Max Time Providers Spend per Transaction (minutes) | Potential Average Time Saving (minutes) |
|---|---|---|---|---|---|
| Eligibility and Benefit Verification | Manual | 14 | 1 | 34 | 10 |
| | Partial | 5 | 1 | 15 | 1 |
| | Electronic | 4 | 1 | 10 | |
| Claim Submission | Manual | 7 | 1 | 19 | 4 |
| | Electronic | 3 | 1 | 10 | |
| Claim Status Inquiry | Manual | 17 | 3 | 50 | 13 |
| | Partial | 5 | 1 | 10 | 1 |
| | Electronic | 4 | 1 | 10 | |
| Claim Payment | Manual | 8 | 1 | 20 | 4 |
| | Electronic | 4 | <1 | 11 | |
| Remittance Advice | Manual | 11 | 1 | 27 | 7 |
| | Partial | 4 | 1 | 10 | 0 |
| | Electronic | 4 | 1 | 8 | |
| **Total Potential Time Savings (Manual)** | | | | | **38** |
| **Total Potential Time Savings (Partial)** | | | | | **2** |

Note: All participants were asked to report time by the three modes of completion (manual, partial electronic, electronic). For some transactions, partial time was not reported.

partially electronic and manual transactions. Tables 10 and 11 present the average times spent by medical and dental providers conducting fully electronic, partially electronic and manual transactions along with the potential time savings of completing tasks fully electronically as opposed to partially electronically or manually.

## Limitations

Over-counting or under-counting may exist.

- Some transactions, such as prior authorizations and claim submissions, may have been initiated manually by a medical and dental provider and converted to an electronic transaction by a practice management system vendor or clearinghouse before being submitted to the plan. These would ultimately be reported to the CAQH Index as part of the plan data submission as fully electronic transactions.
- When medical and dental providers contact a plan call center, the representative may technically respond to multiple inquiries in a single phone call without the ability to log the distinct transactions, resulting in under-reporting to the CAQH Index.

No direct relationships should be inferred between or among the volumes of transactions.

- Few plan systems can easily distinguish claim submissions that are requests for payment from encounter reports or claim submissions that are only transmissions of encounter information. As a result, some claim submissions reported to the CAQH Index may not be requests for payment.
- Claim submissions may be reported to the CAQH Index for which there is no corresponding payment due from the health plan after adjudication, such as when a patient is meeting the annual deductible. In these cases, the patient encounter may cause a range of administrative transactions to be reported to the CAQH Index for which there is ultimately no corresponding claim payment transaction.
- Some practice management systems make periodic eligibility and benefit verification requests that are not connected to patient encounters. As a result, some of the eligibility and benefit transactions reported to the CAQH Index may never result in a claim submission or a claim payment.

The CAQH Index uniquely tracks only direct costs.

- The costs and savings reported account only for the labor time required to conduct transactions. They do not reflect the time and cost associated with gathering information for the transactions. Systems costs including costs associated with using clearinghouses or third-party vendors are also excluded from the cost and savings estimates.

Sample variation may impact year-over-year transaction cost trends.

- Medical and dental provider costs to conduct specific transactions reflect a snapshot in time for the specific group of providers participating in the CAQH Index in a given year. Sampling factors such as salary, the learning curve for a new employee to process electronic transactions, and the mix of specialty type may impact trended data.

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| Centers for Medicare & Medicaid Services | Lorraine Tunis Doo |
| JE Consulting | Jay Eisenstock |
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| athenahealth | Joe Hendrickson |
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| American Dental Association | Sarah Tilleman |
| Experian Health | Beth Wolskij |

Note: To ensure data privacy, CAQH does not make the list of health plan or provider data contributors available.

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